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THE

NEW YORK
JOURNAL OF MEDICINE,

AND THE

COLLATERAL SCIENCES.

EDITED BY

S. S. PURPLE, M.D., AND STEPHEN SMITH, M.D.

> Verumque est, ad ipsam curandi rationem nihil, plus conferre, quam experientiam.
> CELSUS.

VOL. XV. . . . . NEW SERIES.

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JULY, 1855.

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4th. *Surgical Clinique, with the Diseases of the Genito-Urinary Organs*, every Wednesday, from 3½ to 4½, P. M., by Prof. Van Buren. Besides its general Surgical advantages, this Clinique presents ample opportunity for the study of Syphilitic Diseases, Strictures, &c.

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New York, 1855.

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Buffalo, 1855.

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New Haven, May, 1855.

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CASTLETON, VT., Jan. 1, 1855.

THE

New Hampshire Journal of Medicine.

EDITED BY

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THE NEW-YORK

JOURNAL OF MEDICINE

FOR JULY, 1855.

PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. I.—*On the Climate of the Valley of the Sacramento, California.*

By F. W. Hatch, M.D., of Sacramento City.

On a former occasion, allusion was briefly made to a few of the peculiarities of the climate of California, and the diseases referable to them. Some of these deserve a more particular notice, and others, which the space then allotted to us excluded, are full of interest to the physician, and possess an important bearing upon the sanatory condition of the inhabitants.

A summary statement of the Meteorology of a portion of the State,—an abstract of the observations of the past year,—may likewise prove useful for general reference, and afford, at a glance, a more accurate knowledge of the true characters of the climate, than could be effected by the most elaborate review.

Much has been written latterly in elucidation of the climatic features prevailing in this State, with various degrees of correctness, and yet, it would seem that erroneous views are still conjectured of many of its most important and interesting peculiarities. Indeed, it is not without a show of reason, that some incredulity should be entertained by those unacquainted with the subject, as to the ingenuousness of some of the statements which have been made; for, so beautiful is the picture, that what is in reality but a faithful portraiture, appears like a sketch of fancy or the richly-embellished vision of the enthusiast.

It is not the purpose of the present article to present a detailed view of the climate of California. A general examination and analysis of the meteorological observations in our possession, pertaining to the locality of Sacramento, their comparison, and the deductions growing out of the results thus obtained, together with such therapeutical inferences as suggest themselves, having a more or less intimate relation to the climate, will alone be attempted.

The location of the City of Sacramento, in the valley of the same name, has heretofore been described in an article upon this subject, as well as a general yet sufficiently succinct account of the topography of the valley. No further allusion is required at this time.

It is scarcely possible, in a series of observations extending through a single year, to afford an infallible, or absolutely exact view of a climate. Seasons are frequently so variant, and departures from a uniform standard so great in any single, isolated year, that perfect accuracy is not attainable. In general, however, the mean temperatures of a place do not vary much; and though the mean of a series of observations, extended through a large number of years, might alone satisfy the demands of an exact and rigid science, the approximation will be sufficiently near to subserve the purposes of the present communication.

The meteorological observations from which the following tables are deduced, were taken by myself, and with such precautions as seemed best calculated to obviate the errors which too often creep in to destroy the accuracy of thermometric investigations. We shall not attempt a thorough and lengthy analysis of all the meteorological elements of which these observations are comprised. A general summary will be presented, with such explanatory remarks and reflections as shall seem best adapted to subserve the purposes of the present undertaking, to wit, the proper appreciation of the climatic features of a portion of the valley of the Sacramento.

The subject is one full of interest,—the topic embraced in it is attractive in almost every aspect; and as the eye delights to dwell upon the rich and beautiful landscape spread out before it in the gorgeous magnificence of nature's own device, so the mind of the Californian is wont to regard with peculiar pleasure the real charms, the intrinsic loveliness of the climate of the State, and linger with the enthusiasm of fascination upon the pleasing reflections with which its contemplation is associated. Without attempting to invest the subject with the extravagant embellishments of fancy, it shall simply be our object to lay before the reader the outlines of the climate for the past year, and leave the groundwork to be supplied by himself.

The table on pp. 12 and 13 exhibits the mean monthly results of the observations from April, 1854, to March, 1855, inclusive. A few of the more striking peculiarities of this table require a casual notice.

The highest mean monthly temperature for the year, calculated from four daily observations, viz., at sunrise, meridian, sunset, and 10 P. M., was 75°70, in July; the mean maximum temperature of the same month having been 91°32, and the extreme maximum 103°. July therefore is shown to have been the hottest month in the year. The coldest month was January; the mean of four daily observations having been 45°23, the mean maximum temperature 53°88, and the extreme maximum 68°. The extreme range of the means of these two months, therefore, was 30°47, and between the absolute extremes of the year, 79°; or from 103° in July to 24° in January.

Next to July, in exaltation of temperature, was August, —the mean monthly temperature being 70°33, or a little more than 5° less than July. In the extreme of heat, there was a difference of but one degree of Fahr.,—the maximum of August having been 102°.

METEOROLOGICAL OBSERVATIONS FOR SACRAMENTO, Cal., from April, 1854, to March, 1855, inclusive; Lat. 38°34′40″ N., Long. 121°40′5″ W.

1854	THERMOMETER. Four Daily Observations.					EXTERNAL THERMOMETER. Extremes of Four Daily Observ.								BAROMETER.				ATTACHED THERMOMETER.			THERMOMETROGRAPH.							HYGROMETER.				
						Maximum.				Minimum.														Extremes of Month.				Dew Point		Moisture in air.		
	Sunrise.	Meridian.	Sunset.	10 P. M.	Monthly mean.	Sunrise.	Meridian.	Sunset.	10 P. M.	Sunrise.	Meridian.	Sunset.	10 P. M.	Sunrise.	Meridian.	10 P. M.	Monthly mean.	Sunrise.	Meridian.	10 P. M.	Mean max.	Mean min.	Mean range.	Maximum	Date.	Minimum.	Date.	Maximum	Minimum.	Maximum	Minimum.	Mean.
April	53·20	69·12	62·38	57·96	60·66	62	79	74	68	47	54	53	50											84	16th	47	9th, 22d 20th					
May	50·11	69·34	64·38	57·66	60·48	58	79	76·50	69	42	55	51	47	29·98	29·94	29·92	29·94	66·38	69·80	69·33	72·25	49·93	22·32	81	17th	42	17th	58·50	32	·683	·295	* ·400
June	54·04	76·03	72·05	65·33	66·86	06	87	84	78	46	67	62	50	29·96	29·95	29·93	29·94	66·70	75.00	72·70	81·05	54·04	26·97	05·50	10th	46	2d	65	41	·802	·354	·537
July	61·25	88·74	80·17	74·88	75·70	73	97·50	92	83	51·50	72	67	61	29·90	29·95	29·92	29·92	63·00	63·00	80·87	91·32	01·25	30·22	103	13th	51·50	20th	68·50	43	·849	·243	·507
Aug.	55·90	81·90	76·25	67·25	70·33	69	96	05	84	49·50	72	68	58	20·05	29·95	29·93	29·94	73·42	75·35	77·52	87·00	55·90	31·09	102	16th	49·50	2d	08	45	·609	·254	·460
Sept.	51·38	70·33	70·63	62·70	65·26	61	80	87	72	47	68	64	55	29·93	29·97	29·92	20·94	68·03	70·73	73·33	81·85	51·38	29·83	94	14th	47	16th	60·50	44	·691	·252	·493
Oct.	51·32	71·03	68·25	59·07	62·56	62	88	86	75	46	62	60	52	80·00	30·00	30·00	30·00	68·83	70·83	73·00	73·83	52·38	21·54	93	2d	46	14th & 27th	63	31	·905	·200	·508
Nov.	44·21	65·25	63 13	54·53	56·78	52	70	69	61	89·50	58	57	46	30·09	30·00	30 07	30·07	62·10	65·20	65·80	68·13	44·21	23·85	74	1st & 6th	39·50	10th	50·97	26·00	·086	·306	·404
Dec.	37·25	55 12	53 90	47·41	48·42	52·50	56	54	57	28	50	50	36	30.16	30·16	30·13	30·15	56·03	62·58	61·54	59·04	37·25	21·70	69	1st & 17th	28	30th	48	25·0	·813	·293	·539
1855																																
Jany.	38·32	40·55	49·10	43·06	45·23	49	63	64	55	24	39	38	32	30·07	30·07	30·06	30·07	31·20	53·35	53·80	53·88	38·82	17·17	68	31st	24	0th	49·9	25·9	·916	·308	·634
Febr.	42·35	00·10	57·57	51·60	52·90	54	67	04	59	32	53	48	41	30·05	30·05	30·04	30·05	50·35	58·60	59·28	63·02	42·35	20·60	71	16th	32	21st & 24th	58·8	27	·959	·323	·559
Mar.	48·50	63·80	59 25	54·84	56·66	57	73	60	63	37	50	46	42	30 01	30·01	29·06	29·99	61·64	62·48	63·00	00 50	48·60	18·03	76	25th	37	17th	60·4	36	·939	·437	·633

* Last eight days of May.

METEOROLOGICAL OBSERVATIONS FOR SACRAMENTO, Cal., from April, 1854, to March, 1855, inclusive; Lat. 38°34′40″ N., Long. 121°40′5″ W.—[*Continued.*

1854	PSYCHROMETER.						WIND. Four Daily Observations.—Direction.															
	5 to 6½ AM		3 to 3½ PM		10 P. M.		N. to E.				E. to S.				S. to W.				W. to N.			
	Mean dry bulb.	Mean wet bulb.	Mean dry bulb.	Mean wet bulb.	Mean dry bulb.	Mean wet bulb.	Sunrise.	Meridian.	Sunset.	10 P. M.	Sunrise.	Meridian.	Sunset.	10 P. M.	Sunrise.	Meridian.	Sunset.	10 P. M.	Sunrise.	Meridian.	Sunset.	10 P. M.
April							5	4	5	3	6	1	4	3	9	12	12	15	10	12	10	10
May							2	1	3	1	20	11	11	13	5	12	14	14	4	7	3	3
June							0	0	0	0	21	10	21	20	7	10	7	9	2	10	2	1
July							0	0	0	0	20	9	19	20	8	13	10	9	3	9	2	2
Aug.	58·61	54·54	88·90	70·64	67·38	59·25	0	0	0	0	25	12	17	16	5	14	12	15	1	5	2	0
Sept.	53·80	50·66	80·16	64·96	62·16	56·16	0	1	0	0	21	15	17	20	9	11	11	10	0	3	2	0
Oct.	52·64	49·41	73·19	60·03	60·19	54·99	0	2	0	0	20	16	16	14	5	6	7	12	6	7	8	5
Nov.	45·56	43·26	67·56	56·50	54·53	49·92	3	3	4	3	9	10	7	9	4	2	5	6	14	15	14	12
Dec.	38·77	36·51	58·45	49·80	47·32	44·19	0	4	1	1	13	9	15	15	1	3	2	2	17	15	13	13
1855																						
Jany.	38·84	37·13	52·87	46·51	42·97	40·51	2	10	9	2	10	10	12	16	7	3	3	2	12	8	7	11
Febr.	45·25	42·53	61·07	52·42	51·85	47·60	3	2	6	7	8	6	5	4	5	10	9	6	12	10	8	11
Mar	50·90	48·83	65·00	56·42	55·16	52·03	7	3	2	4	10	8	9	11	8	11	11	10	6	9	9	6

1854	FORCE OF WIND.								WEATHER.													
	Sensible to Mod.				Brisk to Violent.				Clear or mostly so.				Cloudy or mostly.						Rain.		Fogs.	
	Sunrise.	Meridian.	Sunset.	10 P. M.	Sunrise.	Meridian.	Sunset.	10 P. M.	Sunrise.	Meridian.	Sunset.	10 P. M.	Sunrise.	Meridian.	Sunset.	10 P. M.	Clear all day.	Cloudy all day.	Days.	Inches.	Days.	Inches.
April									14	19	17	21	16	11	13	9	10	3	11			
May	20	22	19	19	11	9	12	12	20	24	15	16	11	7	16	15	17	3	4			
June	26	23	24	28	4	7	6	2	19	25	26	28	11	5	4	2	19	2	3	0·50	4	
July	28	28	27	26	3	3	4	5	26	27	30	30	5	4	1	1	23	0	0		0	
Aug.	27	24	25	20	4	7	6	5	28	30	29	30	3	1	2	1	28	0	1		2	
Sept.	27	25	25	22	3	5	5	8	25	28	26	30	5	2	4	0	18	0	1	sp'kl	2	
Oct.	28	26	28	28	3	5	3	3	17	20	16	25	14	11	15	6	8	4	10	1·03	5	
Nov.	28	26	27	29	2	4	3	1	24	27	25	27	6	3	5	3	20	2	4	0·67	7	0·0163
Dec.	28	23	28	29	3	8	3	2	18	19	22	23	13	12	9	8	11	5	5	2 20	11	0 1243
1855																						
Jany.	28	25	26	28	1	4	3	1	10	14	13	17	21	17	17	13	7	11	10	1·40	12	0·081
Febr.	24	21	23	23	4	7	5	5	17	14	16	18	11	14	12	10	13	7	12	4·21	3	
Mar	29	24	27	28	2	7	4	3	10	12	14	23	21	19	17	8	5	5	12	3·672	1	

Dividing the year into its appropriate seasons of spring, summer, autumn and winter, we find the mean temperature to have stood as follows: for the three summer months we have a mean, by four daily observations of the thermometer, of 70°96; the mean maximum temperature being 86°45, and the mean minimum 57°06.

For the autumn months the mean temperature was 61°53, and the maximum and minimum extremes equal to 74°60 and 49°32, respectively.

In the winter months, ending with February, we find the mean temperature to have been 48°85; the mean maximum being 58°64 and the mean minimum 39°30.

The incompleteness of the tables for the three spring months, for a single year, excludes them from the comparison.

It is thus shown, that, between the summer and fall months, there was a mean difference in temperature of 9°43, and between the fall and winter months, a difference of 12°68; the extreme variation between the means of the three hottest and the three coldest months,—between winter and summer—being only 21° 21.

In this respect the climate compares favorably with some of the most favored climates in the world. By contrasting the results just obtained with the reported meteorological statistics of some of these countries, we find that, at Nice for example, the mean difference between the summer and autumn was merely a degree greater than at Sacramento; between the autumn and winter months 0°92 greater; and between the mean temperatures of winter and summer 2°36 greater, or 23°57 for Nice and 21°21 for this city. In Italy, the southwest of France, and the southeast of France, a similar relation is ascertained to exist—the advantage, in each instance, being on the side of Sacramento. The following comparative statement of mean temperatures, during different seasons of the year, of several localities frequently resorted to by the valetudinarian, together with the same results for Sacramento, may not be without interest, and is certainly highly flattering to the climate of California :—

	Mean Winter Temperature.	Mean Summer Temperature.	Mean Autumn Temperature.
Sacramento..........	48·85	70·96	61·83
Marseilles............	45·50	72·50	60·08
Rome................	48·90	72·16	63·96
Naples...............	48·50	70·83	64·50
Florence		74·00	60·70

The subjoined statement exhibits the mean difference between the summer and winter :—

	Mean Difference between Summer and Winter.
Sacramento..............................	21·21
Nice..	23·57
Southwest of France.......................	26·42
Southeast of France.......................	29·26
Italy	27·56

By an examination of the above tables it will be seen that Sacramento possesses several very important advantages over the most favored of these localities. The statement of the means for Sacramento is that obtained from four daily observations of the thermometer—the sunrise observation being represented by the minimum, as noted by the self-register thermometer. Such is stated not to have been the case in the other localities, and this fact alone adds much to the favorable aspect of the comparison, so far as relates to Sacramento.

If the means of the maximum and minimum are used, the general result will not be essentially varied. It is not intended to convey the impression that a like similitude exists between these climates in their minutest details. In the monthly extremes of temperature, and their difference during each separate month, as well as in the daily range of the thermometer, a wide discrepancy is sometimes observed.

Compared with the climate at San Francisco, these places present a yet more remarkable contrast, and some of these must yield the palm, for equability of annual temperature as well as for that of successive months, to the busy city. In the monthly extremes the contrast is not so favorable to San Francisco; though it is proper to state that the minimum extreme at San Francisco, from which our results are taken, was that given by the self-register thermometer, and consequently the range is greater than when the observations are confined to the day, as in the case of the other localities with which we have compared it. The comparison exhibits the following results, viz.: the mean difference between the summer and fall months 0°31; between fall and winter, 5°09; between the hottest and coldest seasons (between winter and summer), 5°40. In San Francisco the mean summer temperature was 60°02, mean autumn, 50°71, mean winter, 54°62, mean spring temperature, 56°87. A reference to the tabular statement given above of these temperatures in other localities will at once and incontestibly establish the superior equability of the seasons at San Francisco. The following will place the subject in a still stronger light;—

Table of the Variation of Monthly Means, calculated from the Mean Maxima and Minima.

	San Francisco.	Madeira.	Nice.	Italy.
January to February....	2·93	0·80	3·07	5·50
February to March......	2·67	0.90	2·72	4·33
March to April,.........	2·67	0·80	4·20	6·21
April to May...........	2·99	2·50	7·40	7·63
May to June............	1·31	1·80	5	5·80
June to July...........	2·81	3·70	4·25	5·12
July to August.........	0·91	1·80	2	0·82
August to September....	0·16	0·10	4	4·30
September to October....	0·21	3·60	9·50	9·53
October to November....	2·82	3·60	7	9·06
November to December..	4·63	2·60	5·05	5·85
December to January.....	0·57	1·60	2·90	3·40

In the daily ranges of the thermometer the coincidence is entirely lost, and the climatic inferiority of the foreign localities is satisfactorily shown.

To return from this digression. It has been already stated that the highest mean temperature of the past year was in July—the thermometer having risen to the height of 103°, and, according to some, as high as 107°. During three days, the temperature at 3 P. M. rose above 100°, and above 90° during nineteen days. At sunrise, the thermometer was 60°, during seventeen days, and above 70° at 10 P. M. during twenty days. The greatest daily range between the maximum and minimum temperature was 39°; next 36°35; the smallest range was 18°. During twenty days, there was a thermometric range of 30°, or over. The above presents a rather extreme example of our summer weather. In exaltation of temperature, it is stated by old residents of the country to have been rarely equalled; and in the fickleness of its disposition, and its gigantic strides from one degree of the scale to another, it stands alone, distinguished from every other month of the year under review.

This extreme heat was not confined to this city or valley. At or near the period of greatest elevation of temperature here, the thermometer in other localities, throughout the State, ranged even higher than in this city. At Placerville, forty miles in an easterly direction, situated among the mountains, over two thousand feet above the ocean level, the mercury stood, in the shade, on the 11th, 12th, and 13th, at 102°, 102°, and 104° respectively; while at Coloma, among the foot hills, eight hundred and fifty-seven feet above the level of the sea, and about fifty miles northeast of this city, during the same week, the temperature ranged from 105° to 114° in the shade. Again, on the 24th, when the mercury in Sacramento reached an elevation of 102°, at Grass Valley, located in a basin among the mountains, about seventy miles in a northerly direction, the thermometer stood at 110° in the shade. At Shasta and Weaverville, both in extreme northern counties of the State, far up in the mountains, the mercury rose, on the same day, to 113° in the former, and 120° in the latter place. On one occasion, during the month of August, a similar exaltation of temperature occurred all over the State.

These facts are introduced for the purpose of conveying a proper conception of our summer weather, and the relation which the thermometer in the mountains bears to that in this valley.

It might very naturally be inferred by those familiar only with the hot weather of the Atlantic States, that the exaltation of temperature we have described would necessarily be attended by the most disastrous consequences to those exposed to its influence; and that, during some of the days of the past summer, the climate must have been almost uninhabitable by the Anglo-Saxon race. Yet such impressions are far from being justly entertained, and such a thing as *coup-de-soleil* is, considering the excessive heat of the sun, rarely met with. The fact is, this severe heat of the summer is seldom oppressive; its daily duration is short, and its declension rapid towards the close of the day. Even during the hottest days, with the sun pouring out the concentrated heat of the tropics, there is an elasticity and freshness maintained by the system to which the residents even of New York are strangers during the highest range of the thermometer in that region. But when we consider the temperature at sunrise, and more especially at 10 P. M., an easy explanation will be afforded, not merely of the actual endurance of the summer climate, but of its positive agreeableness. No better evidence of this is needed than that obtained from the records of mortality which will presently be noticed, and a happy illustration is furnished by the circumstances attending the great fire in July last. Although at the time the temperature was 102°, and our citizens were exposed for hours to the combined heat of the sun and the flames, many laboring vigorously, and all more or less excited by the terrible destruction which was befalling them, not one alarming instance of disease is ascertained to have occurred. Many fell exhausted by fatigue, but none were seriously or permanently impressed by the unusual heat of the day.

The climate of the winter months is delightfully mild. If we examine the table of temperatures, we shall find that the lowest monthly mean was 45°23, and the extreme minimum temperature of the winter only 24°, and this for nearly one day. In this, the coldest month, the mean range between sunrise and noon was 11°23; between noon and sunset 10°36; and between sunset and 10 P. M., 6°13; the mean variation between these hours being only 5°90. In February, which appears to have been the coldest month in the Atlantic States, our mean monthly temperature was only 52°90, and the mean meridian 60°10. Between sunrise and noon the variation was 17°75; between noon and sunset 2°53; and between sunset and 10 P. M. 5°97;—the mean difference between these several hours being 8°75.

Those who have been shivering beneath the cold and merciless blasts of the past month in the Atlantic States, with frames benumbed and energies paralysed by a temperature of 20°, 30°, and even 36° below zero, are fully capable of appreciating the genial atmosphere, the balmy breezes, the temperate sun, and the luxurious enjoyment of a California winter. At that very time, while the vegetable world throughout the Middle and Eastern States was lying dormant beneath the frigid hand of winter, our fields were smiling in the freshness of their early verdure, and the delicate blossoms of wild flowers,—the anemone, the violet, the nemophyla, and the ranunculus,—had already expanded their petals to meet the genial sun and woo the balmy air. What more desirable qualities can be sought for in a climate, than those to which we have thus hastily alluded? Especially, when to these external beauties—to all this array of loveliness in the sky and on the earth, there is added a salubrity unexcelled in any region of the globe, we believe that we shall look in vain for a winter climate more agreeable to the feelings, or better suited to the physical comfort and enjoyment of its inhabitants.

We shall close our review of the monthly mean temperatures, with a hasty contrast of the climate of San Francisco with that of this city.

The following is a concise result of a comparison of this kind, embracing a period of nine months, from April to December, inclusive. Thus, the mean temperature at Sacramento, at sunrise, was *higher* than at San Francisco, in April, 1854, 2°10; in May, 1°17; in June, 3°94; July, 9°38; and in August, 3°48; while at the same hour, the temperature was *lowest* here, in September, 1°92; October, 2°; November, 6°46; December, 9°78.

In the mean maximum observations, the climate of Sacramento was the warmest during every month except one—the difference being in April 2°27; May, 7°64; June, 14°25; July, 20°67; August, 18°71; September, 14°12; October, 5°70; November, 3°. In December, the difference was 1°61, the other way.

The mean temperature, therefore, of San Francisco, at sunrise, was warmer than at Sacramento during the winter months, while the reverse obtained during the summer months.

It would not be without interest to examine into the causes of these differences in the climates of localities with so close a latitudinal approximation. The differences in other respects—in the thermometric range, and in the winds, are equally striking and interesting. Without referring to other causes, it is sufficient to allude to the difference in the topography of the two places, their relative proximity to the ocean, and their unequal exposure to the marine winds and vapors during the summer months.

The observation with the barometer embrace a period of eleven months, and three daily observations. The highest barometer during the whole period was 30·49 inches in December; the lowest 29·44 inches, on the morning of the 1st of January, attended by the severest gale ever witnessed in this valley. The total range of pressure, therefore, was 1·05 inches. The greatest variation in any one month, was 0·88 inch, or more than $\frac{7}{12}$ths of an inch in January, 1855. In February, the extreme range was 0·76 inch, in a period of thirty-six hours.

The range of the instrument from month to month may be seen by the several tables we have prepared. One cannot fail to be struck with the marked difference between the summer and later fall, and winter months. The result of the series of observations with this instrument are highly interesting, and it would be profitable, in a scientific point of view, to subject them to a minute analysis. The relation of the pressure of the atmosphere, as shown by the barometer, to the health of a community, is, however, so equivocal and obscure, as to make such an attempt unsuited to the general purposes of the present communication.

The observations with the psychrometer demand our attention, and the results obtained are important in their bearing upon the public health. It would well repay the trouble, to make a closely-analytical examination of this branch of our observations, and, with the varying humidity of the atmosphere, endeavor to trace some connection of the sanatory condition of the city. There can be no doubt of the existence of such a relation, and that a coincident of cause and effect might frequently be established between the prevalent diseases and the hygrometric condition of the atmosphere. Especially, when associated with diminished temperature, the effects of an increased humidity are, occasionally, clearly manifested in the greater frequency of those diseases which long experience proves to be connected with this atmospheric condition. This was particularly noticed in the increased prevalence of glandular and bronchial diseases, and their kindred affections of the throat, as the fall months succeeded one another, and on the approach of winter.

Towards this season of the year there was also observed a very decided tendency in disease to the assumption of a typhoid character, attended with a severe and obstinate gastro-enteritic complication. The greater manifestation of rheumatic and neuralgic disorders, with the associated agencies of increased humidity and diminished temperature, further corroborates the views we have advanced of the agency in question.

The topics yet to be considered forbid the extended review of this subject which its importance and interest deserve. It is one of the few tangible atmospheric agencies prevailing in this country to which we can, with plausible reason, refer any very considerable proportion of the idiopathic maladies met with in the walks of the profession. Whether during the excessive heat of summer, or in the milder atmosphere of winter, the influence of the hygrometric condition of the atmosphere is, in our view, plainly discernible in the varying hygienic relation of the climate.

The subjoined tabular statement of the monthly means of the two bulbs of the psychrometer, and the mean relative moisture of the atmosphere, will afford a tolerably clear view of its hygrometric relations. Observe the gradual increase in humidity as the season advances, from August to January, inclusive.

1854 & 1855.	Mean dry bulb.	Mean wet bulb.	Elasticity of vapor necessary for saturation in millemetres of mercury.	Elasticity of absolute vapor present.	Relative humidity
			mm.	mm.	
Aug.	71·63	61·47	20·51	11·12	·54
Sept.	65·39	57·26	16.54	9·91	.59
Oct.	62·00	54·81	14·84	9·21	·62
Nov.	55 88	49·89	12·02	7·82	·64
Dec.	48·18	40·	9·17	6·14	·66
Jan.	44·89	41·38	8·15	5·95	·73
Feb.	52·72	47·51	10·83	7·22	·66
Mar.					

According to the above, the greatest relative humidity was in January, viz.: 73 per cent. of the quantity the atmosphere could have contained, and, therefore, the air was damper than in any other month, although the absolute humidity—the actual amount in gross was really less, in consequence of the low temperature, and its diminished capacity.

We shall refer to the subject of atmospheric humidity hereafter, in another connection. Before dismissing the statistical tables we have been considering, we would refer the reader to the statement of the direction and force of the winds, and to the relative frequency of clear and cloudy weather at different periods of the day, and in different months. With regard to the winds, it will be seen that the southerly winds are greatly in excess during the summer months, and the northerly winds in the winter and early spring. The subject, is, however, more fully referred to in another place.

In order that a just idea may be formed of the clearness of the sky in this valley, it may be worthy of mention, that by an examination of the daily record kept during the nine months preceding the first of Jan., 1855, it is ascertained that the proportion of observations when the sky was perfectly cloudless was as follows, viz.: in March (last 8 days), 7; April, 34; May, 32; June, 45; July, 52; August, 47; September, 49; October, 13; November, 25; December, 5; out of a series of observations made four times daily. These may be still further classified according to the periods of the day, as follows:—

March,	sunrise	1;	mer.	0	sunset	0	10,	P. M.,	6	out of	32	observations.
April	"	7	"	7	"	9	10	"	11	"	120	"
May	"	9	"	5	"	7	10	"	11	"	124	"
June	"	12	"	7	"	10	10	"	16	"	120	"
July	"	8	"	13	"	10	10	"	21	"	124	"
Aug.	"	10	"	11	"	7	10	"	19	"	120	"
Sept.	"	11	"	12	"	4	10	"	32	"	124	"
Oct.	"	3	"	4	"	0	10	"	6	"	124	"
Nov.	"	1	"	7	"	4	10	"	13	"	120	"
Dec.	"	0	"	0	"	0	10	"	5	"	124	"
Total,		61		60		57			113		1100	

In order to the more perfect elucidation of the summary of monthly means which we have now considered, a series of tables have been prepared, an examination of which will essentially facilitate a proper understanding of the peculiar characteristics of the climate.

The first of these is a statement of the increase and decrease in temperature from month to month.

	Difference in monthly means, four daily observ.	Difference in maxima.	Difference in minima.	Difference in mean m'xima	Difference in mean minima.
April to May	—0·17	—3	—5		
May to June	+6·38	+14·50	+4	+8·30	+4·11
June to July	+8·84	+7·50	+5·50	+10·27	+7·21
July to Aug.	—5·37	—1	—2	—4·32	—5·23
Aug. to Sept.	—5·07	—6	—2·50	—5·15	—4·52
Sept. to Oct.	—2·70	—1	—1	—8·02	+1
Oct. to Nov.	—5·78	—19	—6·50	—5·70	—8·17
Nov to Dec.	—8·36	—5	—11·50	—9·09	—6·96
Dec. to Jan.	—3·19	—1	—4	—5.16	+1·07
Jan. to Feb.	+7·67	+3	+8	+9·14	+4·03
Feb. to Mar.	+4·04	+5·24	+5	+3·48	+6·24

It is here seen that the greatest difference between the means of any two months was 8°84—between June and July—or, that the mean temperature of July was 8°84 greater than that of June. A similar relative difference is observable between the mean maxima of these months, viz., 10°27; although, between the actual monthly maxima—the extreme temperature of any two months—the range in June and July is less than between some other months. In this particular, the greatest disparity is between October and November, and the next between May and June.

The table is particularly interesting as showing the gradual increase of temperature to July, and its consecutive stages of declension to January.

Much has been said at various times, and by different writers, of the coolness of our nights, the rapid reduction of temperature after the hour of maximum thermometric elevation. Indeed, in this circumstance consists one of the most agreeable features of the climate. How severe soever the heat of the day—however exalted the temperature under the burning rays of a powerful sun, the evenings are almost invariably delightfully cool. The rapid radiation from the earth's surface, with the declension of the sun, is one of the causes of this agreeable change; yet the principal agent in the phenomenon is to be found in the direct effect of the southerly winds, whose influence is felt in this portion of the valley during the close of the day. The question of the nature of these winds we need not stop to inquire, nor at this time do more than allude to the various theories entertained as to their origin. By some they are supposed to be excited by the excessive heat of the interior—winds of "suction," as they are termed—currents rushing in from the cooler air of the ocean to supply the vacuity occasioned by the rapid ascent of the heated inland atmosphere; while by others they have been denominated "*pushing*" winds—winds sweeping from the Pacific through the Golden Gate under the existing agency of influences local to the Bay, and "*pushing*" the aerial mass before them through the straits and passes to the valleys of the interior.

The foundation for these opinions it is not our present purpose to discuss, though we cannot forbear the expression of our conviction, from the means of information within our possession, of the entire inadequacy of the latter of these opinions, and its want of correspondence with, and incapacity to account for, the phenomena which attend them in their daily revolution.

Whatever may be ascertained on subsequent meteorological investigation to be true of their origin, there can be no doubt as to their effects, nor of their superior agency in causing the atmospheric changes under consideration. The contrast between those evenings when the wind is north or northwest, and others, the most frequent, when the air is cooled by the refreshing breezes from the ocean, is too striking to escape observation, and is one of the most uniform characteristics of the summer climate.

The following tables are designed to illustrate the daily graduations in temperature occurring under this influence:—

Meridian and 10, P. M., contrasted.

1854 & 1855.	Greatest difference.	Smallest difference.	Difference in means.	Difference over 15° in days.	Difference under 10° in days.
April	22	0	11·26	6 days	10 days
May	22	3	11·68	8 "	10 "
June	19	1·50	10·07	5 "	10 "
July	19·50	8	17·08	11 "	2 "
August	24	6	14·65	10 "	3 "
Sept.	20	8	14·03	9 "	4 "
Oct.	20	6	12·36	1 "	8 "
Nov.	17	4	10·72	2 "	13 "
Dec.	15	3	7·71	0 "	22 "
Jan.	18	0	6·49	1 "	24 "
Febr.	15	2	7·20	0 "	17 "
March	17	1	8·96	1 "	16 "

Maximum temperature contrasted with 10, p. m.					
1854 & 1855.	Greatest difference.	Smallest difference.	Difference in monthly means.	Difference under 15° in days.	Difference 20°, or over, in days.
May	22	5	14·59	12 days	3 days
June	23	5	15·72	12 "	5 "
July	24	9	19·66	1 "	18 "
Aug.	27	12	19·75	3 "	14 "
Sept.	26	13	19·15	3 "	13 "
Oct.	21	7	14·16	16 "	2 "
Nov.	22·50	3·50	13·60	14 "	4 "
Dec.	21	4	11·63	25 "	2 "
Jan.	21	2	10·82	21 "	1 "
Feb.	17	2	11·42	21 "	0 "
Mar.	18	2	11·66	22 "	0 "

In the first of these tables are contrasted the temperatures of noon and 10, p. m., showing the difference in the means and extremes of each month at these hours. With regard to the mean differences, the greatest contrariety is seen to have occurred in July, and the least in January. Before this latter month, however, the operating causes spoken of have mainly ceased, and the examination should be confined to the eight months, between April and November, inclusive. With this limitation, the mean difference in temperature at 12, m., and 10, p. m., for the whole period, would be 12°73.

In the column of extreme differences, we find that the greatest disagreement for the eight months was in August, viz: 24°, and the least in November, 17°. In the whole period, the difference was over 15° during 52 days, and under 10°, sixty days, leaving 134 days with a difference between 10° and 15°, inclusive. It will be observed, that after October, the variation in the temperature at these hours becomes rapidly less, until February, when it again increases.

If we contrast the maximum temperature with that at 10, p. m., we shall find the greatest difference, both in the means and extremes, to have occurred in August, and the smallest difference in November. Of the whole period, from May to November, inclusive — 214 days — there were 153 days with a thermometric difference of 15°, or over, and of 20°, or over, during 59 days.

In the succeeding table, the gradations in temperature between the hours of maximum and sunset, and the former and 10, P. M., are more clearly exhibited, as well as the relative frequency of southerly wind, at noon, sunset, and 10, P. M.

1854 & 1855	Max. temperature at sunset and 10, P. M., contrasted; also wind at meridian, sunset, and 10, P. M.				
	Max. and sunset, diff. of means.	Max. and 10, P. M. diff. of means.	Wind south'ly in days, at mer.	Wind south'ly in ds. at sunset.	Wind south'ly in ds. at 10, P. M.
1854.					
May.......	7·85	14·59	23 days	25 days	27 days
June......	9	15·72	20 "	28 "	29 "
July......	11·15	19·66	22 "	29 "	29 "
August....	10·75	19·75	26 "	29 "	31 "
September.	11·22	19·15	26 "	28 "	30 "
October...	5·58	14·16	22 "	23 "	26 "
November.	5	13·60	12 "	12 "	15 "
December..	5·14	11·63	12 "	17 "	17 "
1855.					
January...	4·69	10·84	13 "	15 "	18 "
February..	5·45	11·42	16 "	14 "	10 "
March.....	7·25	11·66	19 "	20 "	21 "

The greatest difference between the mean maximum and sunset temperatures was in September, 11°22, and between the ranges at the hour of maximum and 10, P. M., in August, 19°75; the mean difference for seven months—from May to November—being 8°65 between the former hours, and 16°66 between the latter, or nearly double that between the maximum and sunset temperatures.

In the direction of the wind there is not observed so great a disparity, yet sufficient to demonstrate the gradual increase in the prevalence of southerly winds after noon. If the completeness of the observations at other periods of the day—after sunrise and between this hour and noon—would permit, a much more striking contrast could be exhibited.

Upon examination of the daily reports kept during the summer, we find it to be a common occurrence for the wind to change its direction shortly after sunrise round to the northwest or north, and to remain in this quarter for a greater or less period of time, as shown by the tables.

We have dwelt thus long upon this portion of our subject, because it is considered to embrace one of the most important peculiarities of the climate. To the physical system, relaxed and languishing under the burning rays of a mid-day sun, flushed with an atmosphere of 95° or even 100° of Fahr., nothing can be more grateful to the feelings than the cooling breezes which come wafted over the plains, freighted with oceanic vapors and invigorating freshness.

If, with the excessive heat, we consider the dryness of the atmosphere, — the vapor of water present, amounting frequently in the hottest part of the day to less than 20 per cent. of the quantity it could contain,—and reflect upon the evaporation which must be going on from the surface of the body under such favorable influences, some adequate idea may be formed of the delicious sensations which these cooling winds occasion, and the refreshing luxury of their daily return.

It is not surprising if, from changes in temperature so extreme as those which we have seen to ensue after the hour of maximum heat, there should result, in consequence, some injurious effects upon the general health. Indeed, we may consider the transition now under consideration as one of the most prominent and fruitful sources of disease to which we are exposed.

Upon examination of the tabular statements before referred to, it will be seen that the variation in temperature between 3, P. M. (max.), and 10, P. M., was over 20°, during 18 days in July last, while between the maximum (3, P. M.) and minimum (max. sunrise) in the same month, there might have been shown a discursiveness of 30°, or over, during 19 days. The extreme daily range was 39°. In August, the difference between the hours of 3 and 10, P. M., was 20°, or over, during 14 days; between the maximum and minimum 30°, or over, during 21 days; and the extreme daily range was 40°. In September, the mercury exhibited a slighter variability, and the temperature was exempt from those vast extremes, noticed during July and August; yet even in this, there were 13 days showing a range of 20° of

Fahr. between 3, P. M., and 10, P. M. Between the maximum and minimum the difference was 30°, or over, 15 days; the extreme variation having been equal to that in July.

Exposure to conditions of temperature such as we have described, could hardly fail of exerting a more or less deleterious influence upon the system. The wonder is, that it should not be more severely manifested than experience warrants us in believing, or than is shown by the records of mortality. It is, indeed, surprising that, under these atmospheric habitudes, the excessive heat, the variability of the temperature, the exceeding dryness of the air, and the rapid evaporation which, under the scorching rays of the sun, must have been going on from the surface of the cutaneous system, and the hyperæmia, the congestive tension, the exalted susceptibility of the internal secreting organs, there should not have been, during the months referred to, a very decided prevalence of disease. Especially, when we regard the exposure, the excesses, the imprudences, and the general mode of life among so many of the population, it is wonderful that disease should not have more universally diffused itself than is demonstrated by the statistics of the season. Yet there probably never was a summer when the destructive impress of disease was less felt in Sacramento, than the past. It would seem that in almost any other climate in the world, the same obvious operating causes, the same regimenal and atmospheric agencies, could not exist to an equal extent, without an overwhelming manifestation of their disastrous consequences. It will be seen hereafter that such is far from being the case, and that in the months of July, August, and September, combined, the total mortality was only fifty.

With regard to the diurnal variations in temperature, it may be observed that, though these are *ultimately* great, or in other words, though the thermometer range between the hottest part of the day and the coldest is large, yet it is not *usually sudden*, and is thus unattended by those disagreeable and deleterious impressions upon the nervous system which an abrupt deviation to the same extent would be likely to occasion.

The mean temperature of June, for example, at meridian, differs from that at sunset, less than 4°, and from that at 10 P. M., only about 10°, while on the day of the greatest range, viz., 30°50, the thermometer stood at sunset only 5° less than at noon, and at 10 P. M., only 14°. The mean maximum temperature in the same month was 81°15; and on comparing this with the means at sunset and 10, P. M., we find the range only 5° for the former, and 15°72 for the latter, though the difference between the mean extremes of the month—the range between the mean maximum and minimum—was 27°01. The same may be said of other months. It is not until near sunrise that the minimum extreme is observed, and the easy gradations by which the reduction of temperature ensues, as well, also, as the comparatively small diminution which has taken place at an hour when a vast majority of the population would be likely to be exposed, will partially account for the very great immunity from disease by this cause which experience exhibits.

Another modifying and palliative agent in pretty constant action during the season of these winds, may be found in the hygrometric condition of the atmosphere.

It will be seen by an examination of the observations with the psychrometer, that the prevailing state of the atmosphere during the summer months is dry. So extreme is this aridity at times, that the lower aerial strata seem to be almost completely desiccated, or at any rate, to contain but a very meager per centage of their capacity for moisture. On several occasions this has been ascertained to be less than 20, 18, or even 15 per cent., and its effects upon the system are similar to the reputed influences of the sirocco of Italy. On the 15th of August, 1854, at 3 P. M., the temperature being 96° Fahr., the atmosphere could have contained about 460 grs. of the vapor of water in each cubic yard. There was present, in fact, only about 83 grs., or 18 per cent. of the quantity necessary for saturation. At this time the wind was northwesterly, and oppressively hot. Now, although the south wind should, at this time, have come up from the ocean loaded with vapor, a large amount must have been absorbed—377 grs., supposing the temperature to have remained unchanged—by every blast which swept over the valley, before saturation would have occurred. But as the mingling of the cool marine breezes with the heated air in the valley would have lowered the temperature of the latter, and consequently its capacity for moisture, somewhat less than 377 grs. would have occasioned saturation. At sunset the temperature had actually fallen to 84°, and at 10, P. M., to 76°; yet at this latter hour, although the wind was then southerly, the atmosphere was far from being in a state of saturation, containing only 57 per cent. of the quantity it could have absorbed. This is not considered an extreme example, and many similar instances might have been selected for illustration, during the hottest days of the past summer.

We have prepared a table, or chart, by the aid of which, the dew-point and temperature being known, the absolute humidity in grs. is determined. By an observation of this kind every day at noon, we have gained a fair appreciation of the extreme aridity of a portion of the past season. The following are examples of this atmospheric peculiarity. Thus, on the 7th of July, 1854, with a meridian temperature of 73° and a dew-point of 45°, there were present only 3·41 grs. of vapor of water in each cubic foot of air, against 11·96 grs. which it might have held in suspension; on the 14th, 6·79 grs. against 15·89 grs.; and on the 24th, with a temperature at noon of 94°, there were present only 4·30 grs. in a cubic foot, whereas the atmosphere possessed a capacity for 16·84 grs. These few examples may suffice for our present purpose. Is it not probable that this dryness of the atmosphere is one of the reasons of so great an exemption from injurious effects consequent upon the extreme vicissitudes of temperature? Upon examination of the tables, it may be seen that, at 10, P. M., the mean relative moisture, or the per centage, during the hot months of summer, was not large; in August it was 62 per cent. Inasmuch as cold associated with moisture is rendered much more deleterious to the system than in the opposite hygrometric condition of the atmosphere, it seems fair to conclude that the proposition we have endeavored to maintain is well founded, and that one of the causes, if not the principal one, of so general an immunity from disease, consequent upon exposure to the extremities of our climate, may be found in the comparative freedom of the atmosphere from aqueous vapor.

We said that the variation in temperature was *usually* gradual. Such, however, is not always the case. At times the change occurs with suddenness, and with a rapidity of declension seriously conflicting with physical comfort, and detrimental to physical health. To this cause are to be attributed many of the affections of the mucous, fibrous and pulmonary tissues met with in the summer months; and we believe, moreover, many of those diseases, usually considered to be of a malarious origin, though not actually originating in this cause, may strictly be referred to it as a powerful predisponent, as inducing an adaptability to their encroachments, which would otherwise be successfully resisted by the innate vigor of the constitution.

Upon the nervous tissues, especially, from their intimate relation to the cutaneous surface, the impression bears most energetically, and it requires but a casual inquiry into the exciting causes of the diarrhœas and dysenteries met with in practice to lead the mind to fasten upon this as one of the most prevalent and active. Attention to the avoidance of exposure to these diurnal vicissitudes, and care to avert their injurious consequences by proper clothing and regular ablution, will of themselves prove more effectual preservatives against attack, and of more avail in many cases as remedial agents, than all the appliances of the materia medica.

To individuals with sensitive respiratory organs, whose bronchial and pulmonary membranes are irritable, these changes often prove exceedingly troublesome, and too often confirm a diseased condition, which, under more favorable circumstances, might have been insignificant and unessential. It is difficult intelligently to estimate the true influence of the climate upon pulmonary phthisis. Many of those who die of consumption in this country undoubtedly came hither with the germs of disease already well developed; and, as it is apt to do in any climate, it has here progressed to a fatal termination. We conceive that there is little doubt of the ineligibility of those portions of the State, subject to the influence of the winds from the ocean, and the extreme vicissitudes consequent upon them, for persons of consumptive predisposition. It will be presently shown that at Sacramento, out of 267 deaths in the past year, 29 are set down as cases of consumption; and in San Francisco, out of 1765 deaths in the city proper, and at the hospitals, 203 are reputed to have occurred from this cause. Of course many of those dying at the hospitals should not properly be considered as cases originating under climatic influences belonging to California; for of these 203 more than one fourth were at the United States Marine Hospital, and were composed of seamen dying of diseases contracted abroad.

It would seem that the dryness of our climate, at certain seasons, would render it a favorable one for the disease under consideration, and there can be no doubt that for many cases such is the fact; while the modifying elements which have already been referred to in connection with the daily variations of temperature, as dependent upon the aridity of the atmosphere, must render it much less prejudicial than it would otherwise prove to be. It is probable that in many of the mountain countries, above the level of the fogs and dampness which at times accumulate in the valleys, the condition of the atmosphere may be highly favorable for this class of diseases.

It would be interesting to examine into the relations of the native Californians to tubercular phthisis, and to inquire into the frequency of the manifestation of the disease among those who, by birth and by hereditary impress, are the peculiar subjects of the climatic influence, and serve, in their constitutional tendencies, to illustrate its features. Our means of information upon this subject have been limited, though we have been informed, upon reliable authority, that among the natives of the southern portions of the State true tubercular phthisis is extremely rare. The climate of this portion of the State differs from the more northerly sections in some important respects, being more equable in temperature, and possessing a clearer, drier, more transparent atmosphere. The extremes of heat and cold—the maxima and minima—are said to be less discrepant; it is warmer in winter, and cooler in summer.

The question is one of interest, and admits a more extended examination than will accord with the assigned limits and purposes of this communication.

We have devoted thus much to the subject of the daily variation in temperature to which we are exposed, and its influence upon the health, from a conviction that to this single cause many of the diseases met with in this valley are to be attributed in its direct or secondary relation. In concluding the subject we cannot forbear to repeat the expression of surprise, that, under the atmospheric agencies alluded to, there should not be found a far greater and more general impairment of health than facts or the records of mortality exhibit. It would seem, that under no other combination of circumstances than those which stamp, with emphatic and singular salubrity, the climate of this portion of California, could this immunity from severe disease so widely prevail.

It is not to be inferred that this inequality of temperature is a uniform characteristic of our climate. On the contrary, the daily range of the thermometer is frequently small, and, as may be seen by an examination of the tables, the temperature is, during some months, remarkable for its equability. A comparison with some localities in the Atlantic States presents the climate of Sacramento in a favorable light. At Lambertville, N. J., the difference in the means of Fahr., between the hours of 2, P. M., and 9, P. M., in June, 1852, was 18°49, being an excess of range over that at Sacramento this year of nearly 3°. At Chapel Hill, N. C., the difference in means at 3, P. M., and 9, P. M., for the same month, was 12°40, and at Cambridge, Mass., 11°8; while at Savannah, Geo., the means, at 2, P.M., and 10, P.M., June, 1852, contrast with those in Sacramento, in 1854, at 3, P. M. and sunset, corresponding nearly, in hours of observation, as 6°2 for the former and 4° for the latter.

In monthly means these two places stand in the relation of 77°9 for Savannah and 66°8 for this city. By taking the mean of the difference between the maximum and minimum temperatures in each month at Savannah, and also at Sacramento, we find the result to be nearly 6° (5°95); or, in other words, that the mean monthly range of the extremes of temperature is only 5°95 less in Savannah than in this city.

In Savannah, the greatest range in temperature appears to be in the autumn and winter months; with us in midsummer. In Sacramento the range, in July, was 51°50, and in August 52°50. In Savannah, the previous year, the range was 26°7 and 24°5, respectively; while in February, the range at Sacramento was 39°, and in March 39°. In Savannah, at the same time, it increased to 42°1 in the former, and 47°4 in the latter month.

In many respects the climate of Sacramento is the most delightful of which we have any knowledge. If you take the past year as an example, it surely cannot be surpassed by any other locality in the same parallels of latitude. Although the sun at meridian is at times, during the summer months, exceedingly hot, yet, as before remarked, the atmosphere is seldom oppressive, and the duration of the extreme daily temperature is confined to a very small portion of each day. The fall of the year is particularly attractive—fascinating by its bright skies, its transparent atmosphere and agreeable temperature, and excelling in all that is calculated to please the taste, to gratify the feelings, or to improve, expand and exalt the physical condition of a population. Viewed in all its relations, in the character of the several seasons, and in their succession throughout the year, we regard the climate of our autumn months as surpassingly delightful. Avoiding either extreme, the temperature is moderate; the mornings fresh and invigorating, the noonday subdued into a genial warmth, and the evenings generally mild and beautiful. Such were October and November last. With a mean meridian temperature, in the former of 71° and in the latter of 65°—an atmosphere whose freshness is constantly renewed and its salubrity insured by the genial current which sweeps above us, and a sky rivaling that of Italy in its rich and delicate blue, its transparent clearness, its gorgeous glories reflected from the setting sun, and, above all, in the splendor of the night, with its bright stars and deep-encircling blue—with such a climate, where shall a better, or one more suited to the physical necessities of a population, be sought? The winds, which during the summer months prevail most generally from a southerly direction, at this season are more frequently northerly or northwesterly; such is their common direction during the intervals between the rains, and they are then cool, refreshing and invigorating. Our coldest weather in the winter season is experienced during the prevalence of these winds; and their steady perseverance in this quarter is properly regarded as a pretty certain indication of continued fine weather.

Such, in few words, is a faithful portraiture of our fall and winter months, except during the immediate régime of the storm-king. This is only at intervals of a few days' duration, the interregnum being, generally, unexceptionably fine.

The sanatory condition of the city, at this season of the year, is universally good. Most of the causes of disease which have been referred to, have now ceased to prevail. The extreme and gigantic strides of the thermometer, between the hottest and coldest portions of the day, have given place to a more regular, yet agreeable variation—a genial warmth at meridian, a pleasurable reduction of temperature in the evening, a cool, bracing, invigorating atmosphere in the early morning. In addition to these favorable considerations, the hygrometric condition of the atmosphere is not to be overlooked. Except for a short time antecedent to, and during the prevalence of rain, the relative humidity is generally small. Even as late as November and December, the mean relative humidity, at noon, was 49 and 53 per cent., respectively, and on several occasions, during each of these months, as low as 30 and 35 per cent., at the same hour. At a later period of the day, it was even much less than this. It is not surprising that, under such meteorological conditions—under this combination of a dry atmosphere, regular, cool and invigorating breezes, and a moderate and tolerably equable temperature—the sanatory condition of the population should remain uniformly good. Such, in fact, is the actual condition of things. The accumulated experience of each year only adds confirmation to the opinions, so often expressed, of the unequaled salubrity of the climate; and of the fall and winter months this is eminently true. The records of mortality, embracing every death occurring in the city, are full of practical interest on this point, and fully establish the position assumed. During the months of December, January and February there was in each month an average mortality, from disease, of 12 persons. This, in a population of 13,000, would give one death monthly to every 1084 inhabitants—a sanatory condition without a parallel in any of the larger cities on the Atlantic coast. This is no isolated example—no peculiar season. A similar calculation for several of the past winters would afford a similar result. Indeed, according to our own experience, the sickness during the present winter and spring has, thus far, exceeded that of the last season

While on the subject of the winter season, it may be interesting to notice, as an item of some importance in the climatic history of Sacramento, the fact of ripe strawberries having been gathered in the gardens immediately on the outskirts of the city, in November of the last year. Perhaps no circumstance can serve as a better illustration of the advantages of the climate, than this.

The effect of climate upon the vegetation of a country—the influence of the seasons in their annual rotation, in retarding or invigorating the productive energies of the soil, is one of the most interesting considerations in which it may be studied, not only in an economical point of view, but in the bearing which it has upon its medical character. The vegetable productions of a country, the variety of plants which it is capable of sustaining, and the development they may ordinarily attain, amid the adverse influences of winter, or the trying extremes of summer heat, must, it will at once be admitted, bear an important relation to its influence upon the animal organizations inhabiting it. The consideration of this subject opens an attractive aspect of our climate, to which we can do no more than allude at the present time.

Allusion has occasionally been made in the preceding pages to the transparency of the atmosphere in California. Indeed, in this attribute of beauty it can scarcely be excelled anywhere. Even to this valley this remark will justly apply, yet with how much greater force to the more elevated districts—to the mountains of the Sierra Range, and especially to the southern portion of the State. As an instance of this atmospheric characteristic, and the extent to which it prevails, the following has been related to us by Dr. Trask, the present State geologist. At San Pedro, in Los Angelos county, the signal-staff of the United States coast-survey, situated at an elevation of 1600 feet above tide level, is distinctly visible to the naked eye at a distance of four miles by an air-line measurement. The diameter of the staff is only 4½ inches. The Doctor informs me that he has repeatedly noticed the phenomenon. Even in this valley, at Sacramento, such is the transparency of the atmosphere at times, that the range of the Sierra Nevada, extending along the eastern limits of the State, at a distance of 100 to 150 miles, have occasionally appeared to lift their huge summits along the very outskirts of the city. I have noticed this only in the morning, before sunrise, and even this very morning (March 21st) so distinctly, as to strike me with surprise.

The atmosphere of the valley is far from always possessing this attribute to so remarkable a degree. Even during many of the hottest, and, as far as the lower strata of air are concerned, the dryest days of the summer months, when the sky is perfectly cloudless, there is observable a vapory condition of the atmosphere obscuring the natural color of the heavens. We have observed this condition much less frequently when the wind was west or northwest, and when a fresh breeze was blowing. At such times it would seem as if the vapor in its ascent would be collected into light masses of clouds, revealing an atmosphere above which rivals, in its deep, clear blue, the sky of the tropics.

In the month of August attention was paid to this subject, with the view of ascertaining the prevalence of this feature, and of classifying the color of the sky, according to the particular shade exhibited. The following is the result:—

Sunrise..............	vapory,	20 days;	light-blue,	5 days;	blue,	2 days.
Meridian.............	"	11 "	"	14 "	"	4 "
Sunset................	"	14 "	"	10 "	"	5 "
10, P. M...............	"	14 "	"	15 "	"	14 "

At meridian, sunset and 10, P. M., two days were omitted.

The above is intended only as an approximation to correctness, and is calculated to convey a very general idea of the appearance of the atmosphere during the month. During several of the days classed as light-blue there was more or less vapor floating in the atmosphere, yet not sufficient to admit a different classification. Those included under the class "blue" presented various shades, even to the deepest.

A single additional reference to the meteorology of the climate will conclude our remarks upon this subject;—we allude to the quantity and number of rains with which we have been visited during the present season. In this respect seasons are so variant, that no single case can serve as an exact standard by which to judge of the true character of all; yet, by the table given below of the number and duration of the rains this season, an approximative idea may be formed of what a rainy season in California consists.

It may not be amiss to remark, that our rains almost invariably come from a southerly direction, usually south or south-south-east. So uniform is this proclivity, that we have had during the past year only one rain from the northerly half of the octant.

The probable source of the north winds in the mountains of Oregon, as well as their invariable dryness, and their pretty constant association with a high barometer, are, of themselves, sufficient reasons for the uniform observance of this rule.

We shall commence our examination with October, 1854, although as early as the 21st of August there was the unusual occurrence of a brisk shower.

The following will exhibit the dates of the rains from October to March, inclusive, with the quantities which fell each day. The measurement was made daily, at 9, A. M., and includes all that fell from 9, A. M., of one day to the same hour on another:—

Rain at Sacramento from October, 1854, *to March,* 1855, *inclusive.*

M'ths	Date	Inches	M'ths	Date	Inches	M'ths	Date	Inches
Oct.	4th	0·42	Dec.	30th	0·255	Feb.	14th	sprinkle
"	9th	0·15	"	31st	1·545	"	22d to 9 A. M. 23d	0·08
			1855.					
"	12th	0·12	Jan.	1st	0·0220	"	23d to 9 " 24th	0·0275
"	13th	slight	"	2d to 9 A. M. 3d	0·45	"	25th to 9 " 26th	0·1750
"	20th	sprinkle	"	3d to 9 " 4th	0·25	"	26th to 9 " 27th	0·3455
"	22d	"	"	4th	light	"	27th to March 1st	2·87
"	23d	0.07	"	5th	l't snow	M'ch	1st	light
"	24th	0·04	"	7th	sprinkle	"	2d to 9 A. M. 3d	0·17
"	25th	0·18	"	8th	0·60	"	4th to 9 " 6th	0·89
"	26th	0·06	"	18th	0·63	"	6th to 9 " 7th	0·165
Nov.	18th	0 65	"	30th	light	"	9th	0·025
"	21st	0·0267	"	31st	0·05	"	12th	0·79
"	27th	sprinkle	Feb.	1st	sprinkle	"	13th	0·03
"	30th	"	"	6th	"	"	14th	0·21
Dec.	2d	8·0818	"	7th to 9 A. M. 8th	0·405	"	29th	sprinkle
"	4th	0·32	"	8th to 9 " 9th	0·063	"	30th to 12 M. 31st	1·392
"	26th	sprinkle	"	10th to 9 " 11th	0·25		Total to April 1st	13·8085

The above includes all the days of rain within the time specified, and may be considered to embrace one entire rainy season, although we shall undoubtedly have occasional showers in April, possibly one or two in May. If we extend our examination back to include twelve successive months, to April 1, 1855, we shall have to add for April, 1854, 11 days, when more or less rain fell, varying from the merest attempt to a brisk shower; May, 4 days; June, 3 days; August, 1 day;

September, 1 day; making in amount an aggregate of about two inches. It is proper to notice, in addition, as a somewhat unusual event, the occurrence of sharp lightning in April, and again in June. On the last occasion it was sufficiently severe, about fourteen miles in the interior of the country, to terminate the career of a valuable cow.

Another subject to which we may profitably refer, is that of the physical influence of the climate—its effects upon the physical system of its inhabitants, considered in a distinct aspect from its morbific tendency. We shall not stop to discuss the question of the influence of the climate upon the development of man, as an organized being, though there are many substantial reasons, drawn alike from analogy and from direct and positive demonstrations, upon which the proposition of its superiority, in this respect, may be successfully maintained. Indeed, it may be remarked, that nowhere is there exhibited in the physical development of the animal organizations of a country, a more conclusive evidence of the directly modifying tendency of its climate, than is displayed among some of the animal races in California. The vigor, the energy, the physical amelioration which ensues upon their introduction into the State, can only be referred to this agency, and their thorough appreciation must lead, with all the weight of a sound analogy, to the substantiation of the principle to which we allude. The view of the climate which we intended, more especially, to illustrate, is that of the resiliency, the elasticity, it imparts to the system under the inroads of severe disease, or the shock of local violence—the recuperative energy displayed under circumstances the most inauspicious and discouraging. During a residence of nearly four years, numerous instances, illustrative of this climatic tendency, have occurred, and we regard it as one of the most remarkable, felicitous and interesting expressions by which it is distinguished. Allusion has already been made to the remarkable exemption from disease exhibited by our inhabitants, under circumstances which, by all the processes of reasoning commonly adopted, would be expected to lead to a different result. In the earlier days of the settlement of the State, these modified influences were much more prevalent than at the present time; but, even now, they are to be seen every day, and serve as living evidences of the excellence of the climate—of the existence of the peculiar element of health under consideration. If we take, for example, the condition of some portions of this valley during the summer months, steaming beneath the rays of a burning sun—diffusing the rank vapors which arise from the depositions of an inundation over vast neighborhoods, or, as shown on a previous occasion, even of this city in the days of the annual floods, and observe the transient, the trifling, the very equivocal evils which ensue, we are at once furnished with a satisfactory illustration of the climatic principle to which we refer. But even more clearly is this principle displayed in the recuperative energy of the system under the destructive influences of disease or violence. No better evidence of this can be required, than what may be fairly deduced from the following case:—

A gentleman, of a naturally strong and vigorous constitution, was severely injured in a recent steamboat explosion at this port. Beside a large number of burns or scalds, denuding the cuticle from an extent of surface not less, in the aggregate, than five hundred square inches, upon his right leg was a compound comminuted fracture of both bones. The comminution was for an extent of about five or six inches of the tibia, and in some ten or twelve pieces. The protrusion of the bones was in two places, one each at the upper and lower extremities of the fracture. In fact, the tibia was completely crushed for the extent mentioned. In addition to the exfoliation of the cuticle by the scalds, the cutisvera and circumjacent cellular structures were entirely destroyed over a space not less than twelve or fifteen square inches. When the patient was found, after the accident, such was the vital depression, such the destruction of tissues around the fractured extremity, such the extent of nervous filaments exposed through the bare and denuded cutis, such the gloom, the mental depression, attending an accident so frightfully fatal in its consequences, that all reasonable probability militated against the saving the limb. If to these untoward prospects we add the profuse drain which was so soon to be established from so extensive a suppurating surface as that which the scalds had exposed, and the debilitation which must inevitably ensue, it must be admitted that the prognosis of an ultimate recovery with the integrity of the limb preserved, was scarcely to be entertained. Surgery—the science, the theory of surgery—here would have taught that amputation was almost inevitable. But an operation, postponed in deference to the wishes of the patient, at length became unneeded. Nature, taking the case into her own hands, almost unaided, save by the influence of the inherent efficacy—the recuperating impulse of a favorable climate, is repairing the injury in her own quiet way, and triumphs over the precepts of science and the sagacity of the surgeon.

This is no isolated case. Its counterpart may frequently be met with in medical and surgical practice. Akin to the principle of organic development, of which we have already spoken, this constitutional element of the climate is equally pervasive, and is strongly exemplified by the most unmistakable evidences.

We have before alluded to the diseases most prevalent in this valley, and need not now repeat what was then stated, nor add any very lengthy description of their peculiar features or relative frequency. The fevers are comprised under the general heads of Intermittent, Remittent, and Typhoid, and their relative frequency may be stated in the above order.

Generally speaking, they are mild in form, and readily amenable to early and judicious treatment; the principal local mischief to be apprehended being a gastro-enteritic complication. A purely congestive type of fever is occasionally, though rarely met with, in this immediate neighborhood. The same hasty glance may suffice for the diarrhœas and dysenteries which occur, especially during the summer and early autumn months.

Under these two names may be comprised the greater proportion of the diseases which demand treatment during these seasons. In their early stages they are generally mild and tractable, but, by neglect or imprudence, often become obstinate and troublesome. We have alluded to what we consider one of the principal causes of these complaints, and to the hygienic means most essential both for their prevention and cure.

Without a proper regard to these precautions—without some attention to the preservation of a healthy action of the cutaneous system, and, through this, of these important internal organs and surfaces of secretion, these affections are too often constantly recurring, and assume a chronic form from which complete relief is with difficulty obtained. Of these diseases, a few cases were observed in September, which seemed, for a time, to threaten the prevalence of a severe form. These were manifested as diarrhœa, attended by frequent watery discharges, colorless, and without much pain or tenesmus, with a cool, dry skin, pale, clean or slightly-furred tongue, and chiefly characterized by an entire absence of the natural warmth of this organ. With these symptoms, was a prostration of strength, a feebleness of pulse, and a peculiar anxiety of countenance, which stamped the disease as one requiring prompt remedial measures. These threatening symptoms were effectually relieved by full and frequently-repeated doses of camphor, combined with calomel, opium, and, if required, capsicum, aided by a scrupulous observance of absolute rest in a recumbent posture.

With the exception of a few such cases as the above, the health of the city, during the month, was good, only twenty-one cases of death having occurred, of which four were of diarrhœa and dysentery, four of typhoid fever, and two stated to have been of ship fever.

No more satisfactory evidence of the sanatory condition of the city can be furnished, than that derived from the report of the annual and monthly mortality. Judged by this standard, the climate of Sacramento may be regarded as one of the most salubrious in the world. The records of mortality are decisive upon this point, and fully and unequivocally sustain the views we have already repeatedly advanced in reference to the health of the city. They also completely corroborate the opinions contained in the foregoing pages as to the character of the meteorological elements of the climate—of such, at least, to which have been ascribed a more or less intimate hygienic relation.

The following is a tabular statement of the principal causes of death during the year 1854:—

Table of Mortality at Sacramento City for 1854.

Diseases.	Deaths.	Diseases.	Deaths.	Diseases.	Deaths.
Diarrhœa	23	Convulsions	5	General Debility	3
Dysentery	13	Enteritis	10	Paraplegia	2
Consumption	29	Hepatitis (?)	2	Epilepsy	1
Fevers	42	Chol. Infantum.	1	Worms (?)	1
Dropsy	8	Chol. Morbus	2	Scrofula	1
Dis. of Lungs	14	Laryngitis	1	Smallpox	5
Dis. Heart	1	Bronchitis	1	Tabes Mesenterica	1
Dis. Brain	8	Croup	4	Ovarian Tumor	1
Dis. Spine	2	Rheumatism	1	Childbirth and sundry accidents, murders and unknown	79
Erysipelas	3	Teething	2		
				Total	266

It is worthy of being remarked that out of the whole number of deaths, viz., two hundred and sixty-six, forty-eight were occasioned by sundry accidents, or direct indiscretion or intemperance, and twelve were Chinamen who died of a peculiar malady, by some supposed to have been the scurvy, contracted on the voyage to California, and the same disease which proved so frightfully fatal among these immigrants at San Francisco. If to these we add those which were manifestly unconnected with climatic causes, such as spinal diseases, convulsions, epilepsy, worms, smallpox, tumors, tabes mesenterica, disease of heart, and paraplegia—being a total of eighteen, we shall have seventy-eight deaths which could not reasonably be referred to any local atmospheric influences, or a little less than one third of the whole; and if to these again we add those from unknown causes, viz., thirty-one, we shall leave only one hundred and fifty-seven deaths during the year, which can plausibly be ascribed to the climate.

Admitting the justness of these deductions, the mortality of the city for the year was only one in 82 inhabitants, in a population of 13,000; or, reckoning from the total number of burials—which includes death from all causes—the ratio of deaths to the population would be only one in 48 inhabitants.

The statistics of mortality in the larger cities of the Atlantic States are not at hand, by which to institute a comparison with the result just stated for Sacramento. From the November No. of the *New York Journal of Medicine* we learn, that in New York city 22,702 deaths occurred in the year 1853. This, supposing the population to have been 500,000, would be a mortality of one in twenty-two, or more than double that of Sacramento, even if we include in the estimate the large number of burials which were the result of murder, suicide and sundry accidents.

The large mortality among those under the age of five years is surprising, and of these 34 were of the age of one year, or under. The proportion is certainly a large one in comparison to the whole number of deaths, and forcibly exhibits the change which has recently been effected in the character of our population,—a change indicative of vast social and moral amelioration. In 1852, as was formerly shown, only 49 of the whole mortality was under five years of age, of whom 17 were under one year; and in 1853, 23 were under five years and 18 under one year. The table on the next page is a statement of the ages of the deceased for 1852, '53, and '54:—

Sufficient has been already said of the relation of the different months to disease. Both in this and a former review of this subject, we have alluded to the causes prevailing in our climate during different seasons, and the statistics of mortality fully corroborate the opinions expressed.

Statement of Ages of Deceased for 1852, 1853 *and* 1854.

AGES.	1852.	1853.	1854.
Under 5 years	32	23	62
From 5 to 10 years.........	4	8	6
" 10 " 20 "	15	21	9
" 20 " 30 "	87	214	41
" 30 " 40 "	70	126	45
" 40 " 50 "	43	79	24
" 50 and over	24	40	10
Unknown..................	49	106	69
Total......................	333	643	266

We shall conclude the subject with a hasty contrast of the mortality of Sacramento and San Francisco, and with such reflections as grow out of it, having reference to the comparative salubrity of the two localities. The statement of mortality in San Francisco is taken from the published report of the city sexton, embracing the burials in all the different cemeteries.

Comparative Mortality of Sacramento and San Francisco.

1854.	Sacramento.			San Francisco.			
January,	37	July,	19	January,	128	July,	154
February,	17	August,	20	February,	97	August,	245
March,	23	September,	21	March,	135	September,	216
April,	12	October,	32	April,	120	October,	166
May,	16	November,	27	May,	126	November,	119
June,	18	December,	24	June,	117	December,	83
Total,			266	Total,			1765

Taking the above as a guide in our estimation of the relative salubrity of the two localities, we cannot fail to be struck with the very evident advantage, in this respect, on the side of Sacramento.

We have already seen that the mortality of Sacramento during the past year was only one in forty-eight; or, if we make certain deductions, only one in eighty-three.

According to a calculation in the *San Francisco Herald*, the population of that city may be set down at 40,000; and, considering the total mortality in 1854, as reported by the city sexton, viz., 1,765, the proportion of deaths to the inhabitants is one in twenty-two. But a liberal deduction should be made for those dying at the hospitals, and who had contracted their diseases elsewhere. Taking the estimate of the Herald, we set these down at 480, which, deducted from the apparent mortality, would make the actual number of deaths in the city proper 1,285.

The proportion of deaths to the population would be one in thirty-one. In any light in which the comparison may be considered, the greater salubrity of Sacramento, during the year 1854, must be at once acknowledged. To make the contrast more exact, perhaps we should only deduct from the mortality of Sacramento the deaths among Chinamen, occurring from the same causes that were observed among this class of immigrants at San Francisco, and in the same months, viz., twelve.

If we take this from the apparent mortality of Sacramento, the ratio of deaths to the population would be one in fifty-one, or a little more than one half the ratio observed in San Francisco. On a previous occasion, the comparison with other years gave us a like relative result.

Notwithstanding the existence of facts like these, placed by the journals of the day within the reach of every one to make the calculation for himself, erroneous views are yet entertained, even within the limits of the State, upon this subject. In 1850, and again in 1852, Sacramento was visited by a scourge, which threatened at one time in the former year to depopulate her streets. The remembrance of this dire calamity yet hangs like an incubus upon the sanatory reputation of the city, is indelibly associated with its history, and enters into all computations even of its present salubrity. The pestilential air of cholera even yet contaminates the breezes which fan, by their refreshing breath, the heated brows of the inhabitants, and the south wind, which sweeps up from the broad Pacific, and the north wind, which brings upon its wings the currents fresh from the snowy summits of the cascades of Oregon, are alike freighted with the subtle exhalations of the plague.

The salubrity of either city might easily be shown to be superior to almost any other large city in the world, as their climatic peculiarities are immeasurably above any portion of the Atlantic States. Yet, compared with each other, it is but just to admit the evidence of facts in establishing the superior advantages of Sacramento in a sanatory point of view.

As we progress in the review of the portion of the State to which the preceding pages are designed more particularly to refer, we find the subject so rapidly increasing in interest, and embracing so great a variety of topics, that we have already extended our remarks beyond the limit assigned to them. We believe that in the main, and as far as they extend, they may be found to convey a faithful portraiture of the climate during the period they include. We trust they may at least serve to correct some of the erroneous opinions entertained of the climatic characters of the Sacramento Valley, however imperfectly they may have portrayed its natural beauties and intrinsic excellences. It is no vain assertion, it is no unsubstantial theorem, to say, that in all that is adapted to advance the happiness, to secure the comfort, to expand and improve the physical organization of a population—in short, in all that can make life a blessing, and add to existence its serenest joys, no climate or region of which we have any knowledge can excel that of portions of the State in which we live. In it may be found almost every variety which the world affords, from plains burning beneath a tropical sun to the ice-bound cliffs and impassable snows of the Sierra Nevada. Spread over its vast extent of territory are some of the most fertile valleys in the world; fields rich in an exuberant harvest of agricultural productions, unexcelled in abundant fruitfulness, and fragrant with the perfume of innumerable flowers. Here the vine spreads its luxuriant branches, and multiplies its delicious clusters, unchecked by the frosts of winter; and here too the fig, the lemon, the olive and the orange expand their fruit beneath the genial sun. Side by side, the miner and the husbandman may dig the earth, and each, according to his own desires, may reap the harvest, while every where balmy breezes cool his brow, and health invigorates his energies. In a word, in fertility of soil, in the intrinsic elements of wealth, in the salubrity of the atmosphere, in the agreeableness of the seasons, the State and the climate are infinitely superior to those of any other section of the United States, and unexcelled by any in the world.

Sacramento, (Cal.), April 4th, 1855.

Art. II.—*Remarks on the Invariable Existence of a Premonitory Diarrhœa in Cholera.* By David Macloughlin, M.D., of London, England.

In the number of the *New York Journal of Medicine* for January, there is an article published by Dr. Hutchison, in which my name is mentioned with reference to the inquiry into the invariable existence of a premonitory diarrhœa in Cholera.

As the question whether there is, or there is not, invariably a premonitory diarrhœa in Cholera, is one of science, and one of the most important connected with the pathology of the disease, permit me to solicit the favor of a place in your Journal for my answer to Dr. Hutchison's six cases, which he has brought forward to prove that Cholera is not invariably preceded by a diarrhœa—so that the readers of your valuable periodical may be the umpires between this writer and myself, and may be enabled to decide which is right.

When Cholera first attracted attention as an epidemic, the vomiting, spasms, &c., the stage of pain alone attracted attention ; the stage of diarrhœa, which was sometimes noticed, was considered as an epidemic, and was supposed only to weaken the patient and thereby render him more liable to be acted on by the Cholera poison.

Thus cholera was supposed to be an entity, a disease *sui generis*, independent of, and a superfœtation on, diarrhœa. If cholera is an entity, a disease *sui generis*, independent of, and a superfœtation on, diarrhœa, innumerable cases must be found where it has attacked persons in perfect health and free from diarrhœa. And to settle the question, whether cholera is, or is not, invariably preceded by diarrhœa, I undertook the inquiry, and gave the result in a pamphlet, under the title "*Result of an Inquiry into the Invariable Existence of a Premonitory Diarrhœa in Cholera.*"

I beg to repeat here, what I have elsewhere again and again stated, that I have now witnessed five outbreaks of epidemic cholera; that I have sought with all the care in my power, assisted by some hundred medical gentlemen, for a case of cholera without a premonitory diarrhœa; and that, although many thousand cases have been inquired into, not one single case has been discovered as an exception to the rule first laid down, in a letter addressed to the Registrar General, and published in his weekly return of births and deaths on the 24th September, 1853. In this communication it is stated that diarrhœa for a few hours, or for a few days, or for a few weeks, invariably precedes the attack of vomiting; spasms, etc., precede the attack of what, heretofore, was called cholera.

In a subsequent letter, also addressed to the Registrar-General, and inserted in the *Medical Times* of the 7th November, 1853, it was first pointed out what was meant by a premonitory diarrhœa, viz., that it was the time which elapsed from the first liquid evacuation to the first cramps. This was called the premonitory time, and all the evacuations which occurred during that time constituted the premonitory diarrhœa.

Dr. Hutchison has brought forward six cases to show that the above rule, as to the invariable existence of a premonitory diarrhœa in cholera, is not without exceptions; but I hope Dr. Hutchison will forgive me if I say that he has, by his own showing, proved that these six cases had had a premonitory diarrhœa; for he says that case the first and case the third were attacked "with vomiting and purging a thin, watery fluid." Now every pathologist knows that the colon and rectum of a healthy individual, free from diarrhœa, contains fæcal matter; and every pathologist also knows how difficult it is, even by strong and repeated doses of purgative medicine, to carry off all this fæcal matter, and induce the watery stools.

Since Dr. Hutchison says nothing of the presence of fæcal matter in the evacuations, we must infer the fæcal matter had been washed away by previous evacuations; and therefore, by Dr. Hutchison's own showing, his patients must have had a premonitory diarrhœa.

In case the second it is said that the person was seized with severe vomiting and purging, and it is added that the patient had no cramps.

Here the existence of a diarrhœa cannot be doubted, but no pains appears to have been taken to ascertain the existence of cramps, so as to mark the cessation of the premonitory stage, and the beginning of the stage of cramps, &c. Because an individual does not scream out, or does not say that he does or does not suffer pain, we surely must not conclude that he has no spasms in his fingers and toes, or so slight as not to excite his attention, and which can be ascertained only by carefully watching these extremities. Besides, it must not be lost sight of that females endure pain with greater fortitude than males. And it must not be forgotten that the degree of spasms in cholera ranges from emprosthotonos or opisthotonos, to the slightest possible sudden contraction and sudden relaxation of the muscles, and which, I repeat, cannot be discovered but by watching the fingers and toes of the patient.*

Therefore, as Dr. Hutchison has not told us whether he had or had not carefully watched, or caused to be carefully watched, whether the fingers or toes were or were not suddenly contracted by spasms and as suddenly relaxed, it cannot be admitted that he is authorized to say that his patient had no spasms, and that therefore it was a case of cholera, without a premonitory diarrhœa, and without spasms.

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* In Case the 8th, in the *Result of an Inquiry into the Invariable Existence of a Premonitory Diarrhœa in Cholera,* the child gave no evidence, by crying or complaining, that she had spasms; but the mother, by watching the fingers and toes, saw that she had spasms.

In the fourth, fifth, and sixth cases Dr. Hutchison admits that each had a premonitory diarrhœa for an hour; but I hope that the Doctor will forgive me if I say that these cases are not reported in such a manner as to satisfy the mind that they were in perfect health, and free from diarrhœa at the time they are reported to be attacked with vomiting and purging. Nothing is said about their usual habit of body, whether they were accustomed to have one or two evacuations daily, or one only every second, third, or fourth day; whether the evacuations were or were not for a few days previous of the usual consistence, and whether the patients were or were not annoyed by more borborygmi than usual, and especially between one and five in the morning.

The mere statement of patients that they were perfectly well, that they slept well, that they ate their food as usual, is no proof that they were not laboring for a few hours, a few days, or a few weeks, under diarrhœa. For too often we find that persons who are laboring under painless diarrhœa do not believe themselves ill, because they have no pain; and we find them walking about for amusement, or for business, or employed in-doors at their usual occupations, with the cold, cyanic state of their skin, and with the cold, clammy dew of death all over their body, the heart having ceased to beat, and the blood to circulate.* And yet these persons will say that they are quite well; that they feel as strong as ever, except, possibly they may add, that they cannot speak so loud as usual; and possibly in a few minutes after these persons are struck down by spasms, vomiting, etc., and cease to breathe in three, four, or five hours after, to the astonishment of all who are not aware of the insidious advance of the disease.

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* In such cases I have opened the femoral and brachial arteries without obtaining a flow of blood.

Therefore, as Dr. Hutchison has not entered into the detailed statement of the previous health of these three individuals, prior to the time he says they were seized with vomiting and purging, we must conclude that he has not shown that his patients were perfectly well, and free from diarrhœa up to the time he says they were attacked with vomiting and purging. And therefore he has not shown that his patients had a premonitory diarrhœa for one hour only.

In conclusion we must say:—

1. That cases first and third had, by Dr. Hutchison's own showing, a premonitory diarrhœa.

2. That case the second had a diarrhœa; but no care was taken to ascertain the existence of spasms so as to mark the premonitory stage, and the stage of cramps, etc.

3. That cases fourth, fifth, and sixth, had each a premonitory diarrhœa for an hour, by Dr. Hutchison's own admission; and, further, the report of these cases are such that they do not justify the conclusion that those individuals were in perfect health, and free from diarrhœa, before the moment at which they are said to have been first attacked with vomiting and purging. And

4. That we must therefore conclude, that these six cases form no exception to the rule laid down, that Cholera is invariable preceded by a diarrhœa for a few hours, a few days, or a few weeks.

I wish to add that, since the publication of the "*Result of an Inquiry into the Invariable Existence of a Premonitory Diarrhœa in Cholera*," epidemic Cholera has again raged in London, and that I have again resumed the inquiry into the invariable existence of a premonitory diarrhœa in Cholera. Assisted by thirty-three gentlemen, we have examined one thousand and ten cases, and have found that every case was ushered in by a premonitory diarrhœa.

During this outbreak of Cholera in London, the St. Thomas, the St. Bartholomew, the Westminster, the Homeopathic, the St. Mary's and the University College hospitals, have carefully inquired into the previous history of each case admitted into their wards, and they have reported that every case had a premonitory diarrhœa.

In 1849 the form of a Register was pointed out at Poplar Union, which was to contain not only the names, residence, &c., but all the details about the previous history of the patients, and especially, whether they had or had not had a premonitory diarrhœa, before the attack of spasms, vomiting, &c. This Register has been most carefully kept by the indefatigable and intelligent clerk of the Union—Mr. Simons—who has daily collected the reports from the medical gentlemen and inserted them in their proper place.

The Register contains the full reports of eight hundred and seventy-two cases of Cholera, all that have occurred in the Union since 1849, and thirty-six medical gentlemen, who attended these cases, have certified that all had a premonitory diarrhœa.

It follows from this mass of facts that the invariable existence of a premonitory diarrhœa in Cholera cannot now be questioned, and henceforth we shall not be told that Cholera is an entity, a disease *sui generis*, independent of, and a superfœtation on, diarrhœa.

We now know that Cholera is the consequence of diarrhœa, the last stage of phlegmoniagy, as spasms, convulsions, &c., are the last stage of fatal hemorrhagy.

34 *Bruton St., Berkeley Square, March* 7, 1855.

ART. III.—*Observations on* DR. MARKOE'S *Report of Cases of Dislocation of the Femur, treated by Manipulation.* By W. W. REID, M.D., of Rochester, N. Y.

THE January number of the *New York Journal of Medicine*, for 1855, contains a lucid and able report from the pen of THOS. M. MARKOE, M.D., one of the attending surgeons of the New York Hospital, giving a detailed account of fourteen cases of dislocation of the femur, " treated by manipulation alone, after the plan proposed by W. W. REID, M.D. of Rochester."

It is not my purpose to undertake a critical review of the report before us; but to offer, first, some remarks and suggestions on Dr. Markoe's observations on the dangers of Manipulation, and on the cases adduced in proof, and to correct an error into which he has unwittingly fallen. And secondly, to notice, some points of difference in the mode of operating, as practiced in the New York Hospital, as it is alleged that it was found necessary to deviate somewhat from that recommended and employed by myself; hoping thus, by discussion and a comparison of views, to elicit truth.

After describing in detail thirteen of the cases included in his report, Dr. Markoe proceeds to discuss the merits of the mode of operating by Manipulation—the rationale of the process—its advantages and its *dangers*. On this latter subject, he observes:

"Every thing in our experience thus far seems to indicate, that this method of reducing luxations is as safe, if not safer, so far as the integrity of the joint and its after usefulness is concerned, than reduction by forcible extension with the pulleys. The method, however, is not without its dangers, and these mainly arise from the immense amount of force which can be exercised by acting on the long arm of so powerful a lever as the whole limb, while the short arm has at most a length of three inches. By the *inconsiderate* or *misdirected** action of this lever force, one of three accidents 'might be produced,' viz.:—The muscles might be torn from their attachments—or the surrounding tissues might be lacerated and contused; or lastly," he observes, "it seems to me very possible that the neck of the bone might be broken by too violent abduction, forcing it against the side of the pelvis."

In reply to this it may be observed, that the whole manipulatory process, as proposed by me, is founded on the principle of relaxing and relieving muscles that are already put upon the stretch. This mode of operating is based upon the discovery, or supposed discovery, of the fact, that the distended or stretched condition of the abductor and rotator muscles constitutes the chief impediment to reduction of the dislocation in question, and not the contraction of the extensor and flexor muscles as theretofore taught in all works on Surgery; and that extension applied to the limb by pulleys or otherwise, only increases the distention of the aforesaid abductors and rotators, and consequently, increases the difficulties of reduction, while it greatly enhances the danger of rupturing said muscles, or of fracturing the neck of the femur. But the mode of manipulating as proposed and employed by me, most perfectly avoids all these difficulties and dangers. It is true, that by "*inconsiderate and misdirected action*," accidents may happen. But the same is true of the simplest operations in surgery—even of phlebotomy.

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* Italics in all cases are ours.

From the experiments and observations which I had made, I had deduced the following propositions and rule:

"1. The chief impediment in the reduction of dislocations is the indirect action of muscles put upon the stretch, by the malposition of the dislocated bone, and not in the contraction of muscles that are shortened, [as heretofore taught].

"2. That muscles are capable of so little extension, beyond their normal length, without hazard of rupture, that no attempt should be made to stretch them further, in order to reduce a dislocation, if it can possibly be avoided.

"3. The general rule for reducing dislocations should be, that the limb or bone should be carried, flexed or drawn in that direction which will relax the distended muscles.

"This general rule will apply to all luxations, but especially to the several varieties that pertain to the hip-joint."

But Dr. Markoe does in fact obviate his own objection, and substantially confirms my own experience, and the principle involved in the foregoing propositions and general rule. He says, "as far as my recollection serves me, and I myself assisted in almost every case reported, *we never have accomplished any thing by proceeding in a direction where great force was required* to continue the movement, *but have always succeeded by finding a direction* in which the mere continuance of the movement *without force* has brought the head into the proper position." Hence the importance of studying the anatomy of dislocations—of every kind of dislocation to which each joint is subject, before we proceed to operate by mere brute or mechanical force, regardless of the condition or action of the muscles. Otherwise, any house-carpenter or ship-builder, who knows how to apply a tackle or pulley, might operate just as well as a surgeon. So too, before we operate by manipulation, it is equally important to understand the direction and action of the *dislocated muscles*, as well as the position of the bone, unless we would stultify ourselves and proceed empirically and hap-hazard, "by making bending movements of the limb in every possible direction," as was recommended by Dorsey.

But notwithstanding Dr. Markoe had so completely replied to his own objection, or apprehension of danger from manipulation, he immediately after observes: "The above report had been prepared for the press, with the exception of Case 13, which has since occurred, when a case presented itself which offers some points so important in their bearing upon what has been said, that I add the history," etc. Although it is not said that the forth-coming case confirms his apprehensions of danger, but only that it "offers some points important in their bearing upon what had been said." But what had been said related only to danger by manipulation. The reader's mind is therefore prepared to expect an accident, or something that will somehow or other prove reduction by manipulation a more hazardous method than he had been taught to believe it to be. Case 14 is then introduced:—

"A man of good muscular development, forty-two years of age, with dislocation of the left femur on the dorsum, of seven weeks' standing. [This should be noted]. Two days after admission—ether and Reid's manipulation were tried. The head descended as usual, until it came opposite to the lower margin of the acetabulum, but from that point, *as the limb was brought down, it slipped on to the foramen ovale.*

The manipulation was repeated several times with all care, varying the degree of abduction on the various trials, but without success." * * * "Manipulation was abandoned, and the pulleys ordered to be applied. But before this was done, it was thought best to place the head of the bone on the foramen ovale, and from that point to try and reduce it by the usual method recommended by Sir Astley Cooper. The head was accordingly placed on the foramen, and while the upper part of the thigh was grasped by an assistant, and lifted strongly outward, I took hold of the ankle and made extension and abduction. The head seemed not to move at all under this force, and while making *strong abduction,* a crack was heard, every thing became loose about the joint, and on examination it was evident that a fracture of the cervix had taken place, leaving the head in the foramen ovale." Dr. Markoe very frankly admits and says: "It must be observed that the new plan is entitled to none of the blame of the fractured cervix. The accident took place, after Reid's manipulation had been abandoned, and while we were attempting the reduction according to the old established and classical method."

We would direct attention to one more "point" in this case. The report proceeds: "we were all surprised at the slight amount of force which was competent to produce such a mortifying accident." Dr. Markoe seems to have forgotten his own just reasoning and very proper caution, which, he tells us, had been committed to paper on the morning of the very day on which this accident happened. He forewarns us of the danger that arises "from the immense amount of force which can be exercised by acting on the long arm of so powerful a lever as the whole limb, while the short arm has at most a length of three inches." It must be confessed that this accident affords a striking illustration of the danger of *misapplied* force, as well as of the importance of the caution alluded to above. But how slight might be the amount of force employed in this case? Let us make a small calculation.

The length of the limb of a medium-sized man, from the trochanter to the ankle, is about thirty inches. This constitutes the long arm of the lever. From the trochanter to the head of the bone, measuring along the neck, might be two or three inches; but standing off, as it does, nearly at a right angle from the shaft, the point or distance, where the force would be exerted, and which must be estimated in a right line with the femur, would not measure over one inch from the trochanter, and would constitute the short arm, while the trochanter would be the fulcrum. Now the power, in this instance, would be to the resistance to be overcome, inversely as the long is to the short arm of the lever. Hence ten pounds applied at the ankle would be equal to three hundred pounds at the head of the bone; for the long arm is thirty times longer than the short one; that is, 30+ 0= 300. But a muscular man, making "strong abduction" at the ankle, as we are told was done in this case, might exert a force equal to thirty or forty pounds and not be conscious that he was employing any thing more than a "slight amount of force," but which, in fact, would be equal respectively to nine and twelve hundred pounds on the head of the bone. Would this be a force sufficient to fracture the cervix?

But to return to the points in this case, having an important bearing on the danger of fracture by manipulation; we find they are all on the other side of the question, and prove the danger to pertain to the "old-established and classical method." The facts in this case, moreover, go still further to prove what I have endeavored to inculcate as one of the most important points relating to luxations and their reductions, viz., that muscles are so little capable of extension beyond their normal length, that no attempt to stretch them further should be made, when already stretched, as in luxations they must be. Take the case above narrated for an example. The head of the bone is on the foramen ovale; consequently all the muscles about the joint are put upon the stretch, except the quadratus and obturator externus. The proas magnus, iliacus internus, and glutei are the most stretched, and hence the partially flexed and abducted state of the limb. These muscles hug the head of the bone firmly in the foramen, and any attempt to abduct the limb would be resisted with all the power inherent in the glutei muscles, the largest about the joint; and being already stretched, they could not yield; the head of the bone could not move, except to be buried more deeply in the foramen, and be more immovably fixed; strong abduction, therefore, must endanger, either rupture of the glutei or fracture of the cervix. The latter being the weakest, would of course yield first. What is the proper kind of manipulation for the purpose of relaxing the distended muscles in cases of dislocation on the foramen ovale, it is not my purpose now to discuss, but I would simply remark that the mode employed in reducing Case 9, described in the report, with a slight modification, is probably the true one; and as Nos. 8 and 9 were both cases of dislocation on the foramen, and both successfully reduced by manipulation, it is a wonder that the same modes were not attempted in this unfortunate Case 14.

Notwithstanding manipulation was fully exculpated from all blame for the accident occurring in the foregoing case, while the guilt was fully proved against the "old classical method," yet a case had come to light directly to the point. In the closing paragraph of his Report, Dr. Markoe informs us that he had received a note from Dr. Watson, who "speaks of a fact which he [Dr. Watson] says, I have on undoubted authority, viz., from one of the Professors in the school of medicine in Toronto, Ca., that an accident similar to that of Case 14, occurred in that city, while the surgeon was attempting to reduce a luxation of the hip-joint by Reid's method."

I have taken special pains to ascertain the verity of this "fact." And, so far as it is possible, I am prepared to prove a negative—that no such case or accident has occurred in the city of Toronto. Both Drs. Watson and Markoe have been imposed upon. It is due, therefore, to the science of surgery, to the profession, and to myself, that this false fact should be corrected; the more especially, as I have recently learned that it was published in the *New York Medical Times* for June, 1853.

Soon after I received a copy of Dr. Markoe's Report, I called on my friend, Dr. Armstrong, now of this city, but formerly a resident of Toronto, and requested him to write to some of his medical friends of that city, and ascertain the facts. He did so; and, moreover, having occasion soon after to visit Toronto, he made personal inquiries of several of the Professors, and other prominent medical gentlemen of that city, respecting the case in question. The following letters will show the result of his investigations:

Toronto, *Feb. 5th*, 1855.

My Dear Doctor,—I have made careful inquiry concerning the case of fracture of the cervix femoris, whilst reduction according to Reid's method was being tried, which case, you say, Dr. Markoe, of New York, mentions as having been reported to Dr. Watson, of New York, by one of the Professors in the school of medicine at Toronto. I am satisfied that no such case ever occurred here. It certainly did not in the General Hospital, and no one here ever heard of its occurrence in private practice; so that in all probability it never did occur. I quite agree with you that it is of very great consequence to settle the points, if possible, conclusively; and I will, therefore, continue my inquiries, and report to you again as to the result.

Believe me, dear doctor, yours truly,

Jas. H. Richardson.

Dr. Armstrong, Rochester, N. Y.

Toronto, *Feb. 15th*, 1855.

Dear Sir,—I have no hesitation in stating that no such case as the one mentioned by Dr. Markoe, of New York, concerning which Dr. Richardson has made inquiry, has occurred in this Hospital during the period I have been connected with it as surgeon, now upwards of eight years. I may also state that it is my belief no such case ever took place in this city. I have never heard of the cervix femoris being broken, or of any other accident having happened during an attempt to reduce a dislocation of any kind in this institution.

You are at liberty to make what use you think proper of this communication, in order to advance the interests of surgical science.

I am, dear sir, yours sincerely,

E. Clarke, F. R. C. S., Esq.
Resident Surgeon, Toronto Hospital.

Dr. Armstrong, Rochester, N. Y.

Rochester, *March 9th,* 1855.

Dr. W. W. Reid—

Dear Sir,—Agreeably to your request made a few weeks ago, I wrote to Dr. Richardson, of Toronto, asking him to make inquiries and inform me as to the particulars of an alleged case of fracture of the cervix femoris, said to have taken place in that city, and referred to by Dr. Markoe in the January number of the *New York Journal of Medicine.*

I have since received a letter from Dr. Richardson, also one from E. Clarke, F. R. C. S., Esq., resident surgeon of the General Hospital of Toronto, both of which are herewith transmitted, and are at your service.

Besides Drs. Clarke and Richardson, with whom I had several interviews during a late visit, I also met Drs. Telfer, Philbrick, Wright, and Aikin, all of whom assured me in the strongest terms that no such case as that referred to by Dr. Markoe had taken place in Toronto. In addition I would merely say, that, so far as I could learn, your method of reduction has not been tried in Toronto.

Very respectfully, yours, etc.,

E. W. Armstrong.

Having thus disposed of the supposed dangers attending the manipulating process *proper*, it is with great deference to Dr. Markoe, and his associates, whose more ample field of observation and experience entitles their opinions to greater weight, that I venture to make a few remarks and suggestions on their mode of operating compared with that of mine.

When discussing the rationale of the process, Dr. Markoe says: "that by flexion of the thigh upon the trunk, the head is caused to pass down and below the acetabulum, and then, by carrying the knee out so as to abduct the limb, the head comes toward the lower portion of the acetabulum, where its margin is least prominent. At this point I wish it to be observed that our mode of procedure varies a little from Dr. Reid's. He recommends, when the head is brought by abduction close to the lower edge of the acetabulum, that by *the rocking movement already described* it be caused to slip in. This is well, and will probably answer in many cases, but *it failed us so completely from the first* that we were led to add *the bringing down of the thigh to the straight position in a state of abduction, still keeping up the rocking motion*, and it has been uniformly in the act of bringing down the limb that the reduction has been accomplished."

"By the rocking movement already described," Dr. Markoe must mean the one which he himself had described in Case No. 1, viz, "a rocking by moving *the leg* backward and forward." I had described an oscillating motion of *the thigh*—not of *the leg*. Suppose the thigh to be flexed at a right angle, or at one a little less or greater, with the trunk, and gently or forcibly abducted, so that the polished, globular head of the bone is poised, as it were, upon the smooth ridge of the great arm of the os ischium, close to the rim of the acetabulum, in which position the pyriformis, gemini, obturator internus and externus muscles are all upon the stretch, what effect would these muscles have upon the head of the bone, whenever *the leg* was carried *outward*, during the aforesaid "rocking motion?" It seems to me most evident, that they must drag it either downward into the foramen ovale, or backward and upward into the ischiatic notch or on the dorsum ilii, according as the one or the other set of muscles happened to be most irritated and stimulated to contract; and that if the head took neither of these directions, but went into its socket, it did so, as it were, by accident. And this seems to have been the experience of the New York Hospital surgeons. For, of the eleven cases reported as occurring in the Hospital, eight were successfully reduced by manipulation, but only two of these on the first trial. In reducing these eight cases, however, there were at least twenty unsuccessful attempts; the head of the bone slipping downward and backward, without going into the socket, that number of times. A similar accident happened in one of the cases reported by Professor Parker. But what were the several steps of his manipulations, we are not informed. It is simply said, that he employed Reid's method. The failures then were to the successes as twenty to eight, or, if we include the case of Professor Parker, as twenty-one to nine. Failure, therefore, would be the rule and success the exception.

These accidents, it seems to me, must be attributed either to the "rocking motion of the leg"—to the too forcible abduction of the thigh, or to the bringing down of the limb before the head had entered the socket, or to any two or all three of these causes combined.

The method of manipulating, as employed and described by me in the article published in the *Buffalo Medical Journal* for August, 1851, and again in the proceedings of the State Medical Society, February, 1852, was as follows:—"Let the operator stand or kneel on the injured side, seize the ankle with one hand, the knee with the other, then flex the leg on the thigh, next strongly abduct it, carrying it over the sound one, and at the same time upward over the pelvis, by a kind of semicircular sweep, as high as the umbilicus; *then abduct the knee gently*, turn the toes outwards, the heel inwards, *and carry the foot across the opposite* *and sound limb, making gentle oscillations of* THE THIGH, when the head of the bone will slip into its socket."

"Gentle oscillations of *the thigh*," while the head of the bone is poised upon a mere point, as before described, and while the foot and leg are directed towards and across the opposite limb, and steadily held in that position, will be found, I apprehend, to be "a procedure that varies [not] a little" from that recommended by Dr. Markoe, viz., a rocking motion of *the leg*, while the thigh is being brought to the straight position *strongly abducted.*

When the thigh is flexed on the trunk, say at an angle of 45°, and is gently abducted, and the head of the bone thus brought close to the lower edge of the acetabulum, if, while gentle oscillations of the thigh are made at the knee, it—the head—does not immediately enter the socket, the knee should be alternately elevated and depressed, thus varying the angle of the thigh. If, by this manœuvre, alternated with the beforementioned oscillating or lateral movement, the head does not enter, we should then cease all motion, and hold the thigh and leg perfectly quiet, for a short period, keeping the former still slightly abducted; and thus give the irritated muscles, ligaments and tissues time to become quiescent, and to accommodate themselves to the new position of the bone. The foot and leg must be kept still also, and firmly directed towards the opposite thigh, for, if we relax or carry it outward, we shall roll the head of the femur away from its resting place and proximity to the acetabulum, and permit, if not provoke the muscles, as already described, to draw it downward into the foramen ovale or backward into the ischiatic notch or dorsum ilii. After a short time we may repeat our attempts as above described, and in all suitable cases — that is — cases of dislocation on the dorsum or into the ischiatic notch, and of not over four to six weeks' standing, we may confidently anticipate a speedy and favorable issue.

The accidents which occurred during the manipulations of Dr. Markoe and his coadjutors, with the exception of one, in Case 14, were by no means serious; they were in fact discoveries, and afford us valuable lessons and suggestions. It is certainly something new in the annals of surgery, that a surgeon can, at his pleasure, convert any one of the four kinds of dislocation of the hip-joint into any one of another kind. With this additional knowledge, which furnishes us with a choice of position from which to attempt reduction, or, if one fails, to try another, it seems to me, that these heretofore most formidable luxations of the femur may hereafter become, when the modus operandi by manipulation is better understood, quite trivial affairs, and be reduced with as much, if not greater facility, than now obtains in reduction of the shoulder joint.

I feel unwilling to dismiss this subject, without adverting once more to the inapplicability and detrimental action of direct traction on the femur by pulleys, Jarvis' Adjuster, or any other power, for the purpose of reduction of the hip-joint. The facts presented in this report of Dr. Markoe alone, to say nothing of hundreds of similar ones, that may be collated from medical journals and works on surgery, would be enough to make men (keen observers and acute logicians on other subjects), pause and inquire, if they were not utterly blinded by authority and custom. In Case 1, Jarvis' Adjuster was applied, and "broke on the first trial," without producing the least effect on the joint, "although the patient was etherized to the extent of complete relaxation." In Case 13, "the pulleys were faithfully and for a long time employed. The head descended, but would not enter the socket. * * * Jarvis' Adjuster was thoroughly tried, until the steel shaft bent, but without success." Bars of steel, brass and iron broken in stretching the living muscles and tissues!! The following case occurred in this country, some eighteen miles from Rochester, in the fall of 1852. A young man, twenty-one years of age, dislocated his left femur on the dorsum. On the day following, two surgeons, with the aid of five or six men, made extension for a long time, and supposed they reduced the bone. Some five weeks afterwards, three other surgeons were consulted and pronounced the bone out. The patient was put into a machine—a kind of windlass—and extension was continued for several hours, but without success. A few days afterwards, he was bled and put under the influence of chloroform, when Jarvis' Adjuster was applied, but it bent or broke, without effecting any thing. A day or two thereafter, he was again bled and took chloroform, when the pulleys were applied and extension kept up, as I am informed, for several hours. But all to no purpose. The bone is still out and the young man a cripple for life, after enduring tortures little short of crucifixion. On the forty-seventh day, about *seven weeks* after the accident, he was brought to me. At this time, the limb was three inches shorter than the other; the muscles of the whole limb, but especially about the hip, were flaccid and emaciated, so that the limb was considerably smaller than its fellow; rotation and abduction were quite free; the head of the bone could be distinctly felt on the dorsum. In the presence of, and assisted by several medical gentlemen of this city, I endeavored to reduce by manipulation. Several attempts were made by myself and others, and persevered in for two hours, but without avail. The head of the bone could be both felt and seen to mount upon the edge of the acetabulum, but could not be made to enter. It was quite apparent, that the capsular ligament had healed and formed new and strong attachments around the neck of the femur, which attachments prevented the entrance of the head, and which it were unsafe to attempt to rupture by mere force applied to the limb. And if the head of the bone had gone in, carrying the ligament before it without rupture, in the form of a cul-de-sac, it is quite certain that a spontaneous re-dislocation, as it were, would have occurred in a short time afterward; as was probably the fact, in case No. 3 of Dr. Markoe's report—a case of *twelve weeks*' standing. In his unfortunate Case 14, in which fracture of the neck happened, and which was of *seven weeks*' standing, there were, no doubt, strong attachments of the capsular ligament, which prevented the head of the bone from entering the socket, for it could be made to move freely around the rim of the acetabulum, but would not mount over it. Quere: Would not the true mode of operating in cases of this kind be to make an incision down to the head of the bone, and open the capsular ligament, sufficient to admit the return of the head into its place?

But to return from this digression, which seemed necessary in order to complete the history of the foregoing case, I repeat, that traction on the femur is force misapplied—is unphilosophical and absurd, contra-indicated by the anatomy of the dislocated joint, and by the plainest laws of mechanics. This I have attempted to demonstrate in former papers, and shall not dwell on it now, but simply observe, that it seems to me impossible for any one, having the slightest knowledge of anatomy and of mechanical philosophy, to fail to perceive, that extension of the thigh, when dislocated in the dorsum or into the ischiatic notch, must powerfully abduct it, and therefore cause the already distended muscles, especially the obturator externus, to bind the head of the bone more firmly behind the brim of the acetabulum, and thereby prevent its mounting over it, except at the expense of the rupture of muscles, or ligaments, or both. The amount of power exerted by pulleys, Jarvis' Adjuster and similar machines, is unknown. It must be very great, but how great has never been carefully estimated.

The impediments to reduction by direct extension of the femor, I have heretofore considered to lie chiefly in the resistance of the six rotator and abductor muscles, which are put upon the stretch, and which are incapable of any further extension without danger of rupture. From the experiments which I had made on muscles, I had drawn the conclusion that they were incapable of any practicable degree of elongation beyond their normal lengths, without rupturing them more or less. Since the publication of these views, Prof. E. M. Moore informs me that he has been in the practice, during his terms of lecturing on surgery, of exhibiting before the students, on the cadaver, both modes of operation—that is, by extension and by flexion or manipulation—that one of his illustrations consists in removing all the muscles about the hip-joint, then puncturing the capsular ligament, and dislocating the bone on the dorsum. He says, when this is done, the limb always assumes the same position of *abduction* and *inversion* that it does in the living or dead subject, when the muscles are in situ and entire. Having dislocated the bone as above described, he now attempts to reduce, by extension made in the manner recommended by all surgical writers. The extending cord is put into the hands of one or more students, and Dr. Moore says he has always found that the strength of *two men* were necessary to bring the bone into place, although there was nothing to prevent it but the remains of the untorn portion of the capsular ligament, which is stretched across the acetabulum and binds the bone behind its rim. While on the other hand, when reduction was effected by manipulation, no more force was required than was sufficient to support the weight of the limb, to flex and rotate it gently while the head was resting on the edge of the acetabulum; to do all which required much less than the whole strength of one man. But he observes, that the head never enters the socket, even under these favorable circumstances, without tearing up another portion, more or less, of the capsular ligament from its attachment at the edge of the acetabulum. He states moreover a fact, which I had myself before observed, that when the muscles about the joint are entire, if the femur is flexed on the trunk and abducted, the glutei muscles are stretched, and then their broad tendons compress the trochanter, and powerfully assist rotation and abduction, to urge the head of the bone into the socket; very much as might be done by the hands, if placed over the trochanter, but much more efficiently. But if the thigh is brought down to a right angle or lower, the tendons of the glutei are relaxed and we thereby lose all the advantage which they would otherwise afford us—another cogent reason for not bringing down the limb towards the straight position, before the head enters the socket.

The experiments which I had made for the purpose of determining the extensibility of muscles, were made on those of sheep, which had been killed from one to two days —that is, on the dead, but still fresh muscle. Soon after I had made known the results and my views, Drs. Bly and Moore performed a series of experiments on the living muscle, viz.: of wethers two years old. The animal was suspended in strong canvass cloth, with one fore leg projecting through a hole, rendered unyielding by firmly binding or hemming the edge. The skin was removed from the knee, for the space of six inches. The ligaments of the joint only were divided, the muscles being left intact; weights were suspended from the foot, and added by degrees, fourteen pounds at a time. Four different experiments were made on as many different animals, with very nearly the same results. The following tabular view of the fourth experiment will explain the whole :

No. of lbs.	32 scds. In.	No. of lbs.	32 scds. In.	Remarks.
9	2	163	13*	The second and fourth columns show the distances in thirty-two second parts of an inch, to which the articulating surfaces were separated on each addition of fourteen pounds.
23	4	177	14	
37	5	201	14*	
51	6	215	15	
65	7	229	15*	
79	8	243	16	
93	9	257	16*	
107	10	271	17	
121	11	285	17*	
135	12	299	18	
149	13	313	18*	
		327	18½	

* Thirty-two secondths of an inch, or about five-eighths.

After two hundred and forty-three pounds had been added, the whole were removed, when the parts regained their normal position. After these had been replaced, and more added, sixty pounds were removed at a time, the parts always regaining what they had lost by the addition of that number of pounds. But when three hundred and twenty-seven had been reached, the leg of the living sheep was completely torn off at the shoulder joint. This happened in every instance, with a weight not varying over fifteen pounds from three hundred and thirty, being sometimes less, sometimes greater. This rupture always took place at the shoulder, never at the knee, although the ligaments of the latter were divided, while those of the former were entire. From these experiments it will be seen that the living muscles were extended about five eighths of an inch beyond their normal length, and regained or contracted to their original position. But Dr. Bly acknowledges that the joint was not very firm; that the muscles seemed rather lax. The results of his experiments compared with those of mine are so diametrically opposite, it is evident that one or the other must be in error—that, contrary to my conclusions, muscles must be elastic, and capable of extension beyond their normal length—and if so, then the distended muscles of a dislocation constitute, not the primary but the secondary impediments to reduction, while the ligaments constitute the primary and chief. This subject needs further investigation by others, who have more ample facilities.

One word on the use of ether and chloroform in reduction of luxations. Believing, as I do, that muscles are the principal agents in producing dislocations, while the blow received is but secondary—that is, that the muscles being in a state of active contraction by force of the will, at that instant a sudden blow, taking the will by surprise, is received on the limb, and propelling it in the same direction which the contracting muscles are giving it, the bone is thrown out of place before the opposing muscles have time to resist this new impulse. I am therefore constrained to believe, also, that muscles may be made, and are, in fact, our most efficient assistants in reducing by manipulation. Consequently "etherization to the extent of complete relaxation," instead of being an advantage, is a detriment, in just so far as it prevents the contraction of the muscles required to replace the bone. Might not this have been one of the causes of so many unsuccessful attempts at reduction, which are narrated in the report of Dr. Markoe? Etherization was employed in every case reported as occurring in the Hospital, except No. 5, and that was the only one which was reduced without difficulty or mishap. The pain produced by manipulation is too trifling to require an anæsthetic of any kind. These remarks, of course, are not intended to apply to cases of luxations complicated with other severe or painful injuries, nor to reduction by forcible traction or mechanical means.

Before concluding, I beg permission to express my acknowledgments to the New York Surgeons, for the complimentary manner in which they have been pleased to speak of my efforts to introduce to the notice of the profession, this mode of reducing dislocation of the femur. It is not only gratifying to me, but honorable in them, and will doubtless be duly appreciated by the profession generally, that they have, in the spirit of true philosophy, undertaken an investigation, which the importance of the subject demanded, and have thus, by their more ample facilities and experience, put to the test, and in a good degree have established, the merits and advantages of this mode of operating. Especially is it honorable in them, when it is evident, that in certain quarters the whole thing is ignored, and there is manifested a spirit of conservatism quite as absurd as that of some forms of radicalism. And that, too, where the operators could not plead ignorance of the facts and proofs that have been adduced in favor of the method. With such men, nothing good can come out of Nazareth. The world composed of such only would remain forever *in statu quo*. The discovery of new truths, advancement in science and progress in the arts would come to an end. "The wisdom of the world would die with them."

ART. IV.—*Remarks on Hemorrhage from the Umbilicus of Infants; with a Table of Seventy-eight Cases.** By STEPHEN SMITH, M. D. Surgeon to Bellevue Hospital, New York.

THE separation of the umbilical cord in new-born infants is rarely attended with difficulty or danger to the child.

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* Read before the Society of Statistical Medicine, New York.

The process, when healthily performed, is purely physiological, and for its perversion requires the interposition of some pathological condition.

One of the most important accidents to which this change is liable is hemorrhage. The slighter forms of hemorrhage from the umbilicus which often occur immediately after the separation of the cord, but are readily controlled, are noticed by most writers on the diseases of children. They can hardly be considered dangerous, and for the most part require but little attention.

There is a form of hemorrhage, however, occurring at the umbilicus of new-born infants of a much more grave and serious character, from its almost universally fatal termination. Our own attention was called to it by having in quick succession two fatal cases in practice; and it was with a view to its illustration that the accompanying statistics were soon after collected. Several highly-interesting papers have recently been written upon umbilical hemorrhage; and though most writers have collected a number of cases, and given the results of their analysis, no one has been to the trouble of tabulating them, and thus rendering available to others the data of their conclusions. This we have attempted to do, and the accompanying tables form the basis of the following observations.

Hemorrhage from the umbilicus is a rare affection, as is shown by the meagreness of its literature. It is scarcely alluded to by systematic writers, and rarely as an accident of which they have personal knowledge. In the Dublin Lying-in-Hospital, no cases are reported in a period of twelve years, during which there were 6,654 births.

The records of private practice confirm the opinion of the infrequency of this disorder. While it is common to meet with a slight bleeding from the umbilicus after the separation of the cord, the oldest practitioners frequently have not met this severe and intractable form. But its occasional occurrence, and especially its great fatality, render it well worthy of careful study, in order to arrive at settled principles of practice.

Etiology.—The consideration of the influence of sex, health of parents, labor, condition of child, condition and changes of cord, etc., in the production of umbilical hemorrhage, embrace most, if not all, the facts bearing upon the important question of its etiology.

Sex.—The sex most liable to this accident is the male. Statistics show that about two thirds of all the subjects of umbilical hemorrhage belong to this sex. It would appear, also, that it is more fatal among males than females.

Without being able to offer any explanation of the liability of one sex over the other to this affection, we may remark that the fact appears to be established by observation, that where the hemorrhagic diathesis exists in families, it is manifested more frequently in the male members. Some interesting cases exhibiting this tendency were reported by Dr. Rush. In one family which consulted him, the six male children were all "bleeders," of whom four died young, from slight injuries resulting in profuse hemorrhage. Dr. John Otto,* of Philadelphia, has related some singular examples of this hemorrhagic tendency in males. Dr. John Hay,† of Mass., has traced a family exhibiting this idiosyncrasy through several generations, and whenever the diathesis manifested itself, it was almost exclusively in the males. Dr. Hughes‡ attended a family of this class, from which he gathered the following among other particulars: that the females, though in no instances sufferers from this predisposition, have, nevertheless, invariably transmitted it to their offspring. The same fact has been frequently noticed by German physicians. Dr. Riecken§ mentions a family in which three boys and one girl died of hemorrhagy; of the grandchildren, three boys bled to death, but no female. Dr. Du Bois also speaks of a family of five boys and one girl; the latter never exhibited any symptoms of hemorrhage, while four of the former were bleeders, three having died in this manner. Many similar examples may be gleaned from medical periodicals, showing quite conclusively that much of the disparity of sexes in the liability to the form of hemorrhage under consideration, is due to an unascertained predisposition of one sex to that condition of system leading to this affection. It is quite remarkable also that this diathesis should be transmitted through the female branch without being exhibited in them personally. Some striking examples are also seen in this collection, as in the cases reported by Mr. Pout (33, 34, 35), Mr. Ray (47, 48, 49,50), and Dr. Hooker (38, 39, 40, 41). In the cases copied from the *Med. Chir. Rev.*, (53, 54, 55, 56), the mother was delicate, and suffered much from profuse menorrhagia.

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* *Medical Repository.*

† *New England Journal,* 1814.

‡ *Transylvania Medical Journal,* April, 1834.

§ *Edin. Med. & Surg. Jour.,* July, 1831.

Health of Parents.—The relation which the previous health of the parents has to this affection of the offspring is not very directly traceable. As far as noticed it is generally stated that the mother's health was good, and, in many instances, other children of the same parents have been healthy. From this we may justly infer that often, perhaps generally, the system of the child is alone at fault. Where, however, several children of the same family successively fall victims to hemorrhage, there can be no doubt of the transmission of a hemorrhagic diathesis. Even then the health of the parents, if noticed, is generally given as good. We have already noticed the fact that females may transmit the hemorrhagic idiosyncrasy in its utmost intensity to their children, and still, in appearance, themselves be healthy. Until, therefore, we can obtain more definite knowledge of the conditions on which the hereditary transmission of disease depends, the precise influence which the parents' health exerts over the health of the child can not be estimated. The parents may, however, confer upon the child a syphilitic taint (cases 21, 76), which would predispose it to this accident, and thus the bearing of the health of the parents may be direct upon the child.

Effects of Labor.—It does not appear that parturition has any causative relation to umbilical hemorrhage. Where it is mentioned, the labor has almost invariably been easy and uncomplicated.

Condition of the Child previously to the Occurrence of Hemorrhage.—There is little in the previous condition of the child to indicate the occurrence of hemorrhage from the umbilicus. At birth, the infant is generally well formed, and has the appearance of health. Within two or three days, however, icteric symptoms generally appear, such as sallowness of the skin, and clay-colored stools; and although infantile jaundice is ordinarily not a grave disease, it so often precedes or accompanies umbilical hemorrhage that it may be considered a symptom deserving of careful attention. A much more serious symptom is the appearance of purpura, which at once indicates a condition of system strongly predisposing to hemorrhage.

In a large number of cases there appears to exist an hereditary tendency to hemorrhage, while in others, though no such diathesis seems to have been transmitted from parent to child, a pathological condition exists which is equally as fatal in its tendency as the former. In these two classes of cases, however, there is one symptom so generally present that it may be considered as referring them both to the same general pathological state. This is jaundice followed by purpura. This jaundice may, as we have seen, depend upon closure of the common and cystic ducts (7, 10, 12) and thus admit of easy explanation; in other cases, it depends upon conditions not susceptible of demonstration, or remedy; in either case it seems to be often the predisposing cause of this form of hemorrhage. Cheyne, who reports the first published case which we have met, introduces it as an example of the fatal effects of infantile jaundice, depending upon what he terms "an original and incurable malconformation of the liver."

The effects of bile upon the blood and the condition of the blood in the hemorrhagic diathesis are facts not well established, yet pathological chemistry in a certain degree sustains the observation that the former is in some measure allied to the latter. Families in whom the hemorrhagic diathesis exists are well known to be very subject to jaundice, while persons suffering from severe jaundice are liable to hemorrhages. As far as chemical investigations of the blood in these two conditions of system have been carried, they show a diminution of the normal amount of fibrin, and an excess of the salts. This state of the blood predisposes to hemorrhage, and affords as satisfactory an explanation, as the present state of pathological science will admit, of the tendency to hemorrhage in these two conditions of system.

Changes in the Cord and its Vessels subsequently to Birth.—The process of desiccation, when healthily conducted, is purely physiological. It commences immediately after the severance of the cord, and is ordinarily completed on the fifth or sixth day. Billard, who describes these changes more minutely than any other writer, concludes "that the separation of the cord is the result of the constriction which the indurated gelatine exercises upon the umbilical vessels at the umbilicus, and also of the continual pulling from this narrowed point of the cord, so dried and fragile." A slight suppuration generally follows the separation of the cord, which terminates in firm cicatrization about the tenth day.

The change which the vessels of the cord undergo are still more important in the consideration of the hemorrhage which may take place from the navel. The following facts relating to the obliteration of the umbilical arteries, are the results of the investigations of M. Lorain, as reported by M. Roger.* They are the most recent investigations of this subject, and are highly interesting.

"There are two modes of obliteration: in the first, the obliteration is provisional; it suffices for the present necessities of the new-born child, and guards against early accidents; it consists in a clot which forms a few hours after birth. This coagulum is formed in children who have not lived more than four or five hours; it commences sometimes in the arteries of the cord, and sometimes at the junction of these vessels with those of the abdomen; it is black, of mediocre consistence, adhering but slightly to the walls of the artery, and is at first very short; subsequently it is elongated by the successive deposition of new molecules, until, at the end of the second day, it occupies two thirds or half the length of the artery, commencing at the umbilicus. It is then firmer, denser, and more adherent to the walls of the vessels. During the succeeding days this coagulum acquires greater consistence, and loses at the same time its black color, and assumes a fibrinous aspect; it becomes more and more regularly cylindrical. In proportion as the clot contracts, the artery narrows. This may be called the provisional mode of obliteration."

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* *Virginia Medical and Surgical Journal*, Oct. 1853.

"The other consists in the complete occlusion of the artery at its umbilical extremity, an occlusion which occurs in the following manner: The extremity of the artery is retracted from the navel, contracts, and presents a conical extremity; this hardly takes place before the twenty-fifth or thirtieth day; at this date the calibre of the artery is very small, and is occupied by a fibrinous clot, white, dense, regularly cylindrical, and closely adherent to the arterial coats. This is the true obliteration."

If we apply the facts already noticed in regard to the effects of bile upon the blood, and the condition of the fluids in a system tainted with a hemorrhagic or syphilitic dyscrasia to the physiological changes in the cord, as established by the investigations of Lorain, we may be able to explain why hemorrhage of an intractable character should occur at the umbilicus in purpura, and the severe forms of infantile jaundice. The child for the first two or three days having the appearance of health, the normal changes in the cord are in progress, the vessels retract and contract, and the plug which fills their cavity effectually prevents all hemorrhage. If the child is already suffering from a dyscrasia, as syphilis or hemorrhagia, this process is but imperfectly conducted. The direct effect of the bile upon the blood by the occurrence of jaundice at this period, would be to interrupt these changes. If persistent, and especially if purpura complicated the jaundice, it would be destructive of the work partially completed.

Separation of the Cord.—Bouchut* remarks: "Up to the present time, hemorrhage has always occurred after the separation of the cord." This assertion is not based on facts. Hemorrhage of the most intractable form may occur about the insertion of the cord before its detachment, both from a traumatic and idiopathic cause. But generally the cord has separated, and the umbilicus undergone complete or partial cicatrization, before hemorrhage has taken place. There seems to be nothing in the period of desiccation, symptomatic of hemorrhage. The cord generally separated on the 5th or 6th days, and this, according to Churchill's statistics, is the ordinary period in an aggregate of 200 cases. There is one condition connected with the process of cicatrization of the umbilicus which is worthy of attention, and that is, the occurrence of a granulating or fungoid surface. This fungus is often persistent, and liable to severe hemorrhage, and therefore demands early attention.

Mr. Ward (*Med. Times*) believes this fungus is due to an excess of vitality in the *vasa vasorum*, which, by preventing cicatrization, is liable on slight injury or ulceration to expose the cul-de-sac of the vessel beneath, and thus give rise to hemorrhage.

Date of Hemorrhage after Birth.—The period within which umbilical hemorrhage occurs (within the first eighteen days) and the open state of the vessels during this time, is evidence that, though their condition is not abnormal, still to their patulous state is due this particular form of hemorrhage. And of more importance is the fact, that hemorrhage generally occurs during the second week,—a period when the closure of these vessels and the cicatrization of the umbilicus is in progress.

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* *Practical Treatise on the Diseases of Children and Infants at the Breast, &c.* By M. Bouchut, translated by P. H. Bird, Esq. London, 1855.

Post-Mortem Appearances.—It does not appear from the investigations of Lorain that a patulous state of the umbilical vessel for two or three weeks, at least, after birth is a pathological condition. These views are confirmed by others. Radford* says of the umbilical vein: "From my examination of infants after death, I conclude that this vessel is not materially changed immediately after birth." Mr. Ray† also states that in the children which he has examined under the age of one month, or six weeks, he has been able to trace a canal in these vessels. Umbilical hemorrhage cannot then be considered as arising simply from a patulous state of these vessels, and the frequency with which this condition seems to have been found in the post-mortem examinations here recorded, has no particular significancy. Nor has there been any thing revealed by dissection, if we except the obliteration of the common duct, which has a bearing upon the etiology of this affection, and we need not further allude to them.

In regard to the etiology of this accident, we conclude,—

That sex has an important but unexplained influence, two thirds being males.

That the most common cause is, a vitiated state of the blood due to jaundice, or a transmitted hemorrhagic or syphilitic dyscrasia.

That a patulous state of the umbilical vessels is not, in these cases, a pathological condition.

That there are no reliable precursory symptoms of an attack of umbilical hemorrhage.

Prognosis.—The prognosis in umbilical hemorrhage depends upon its cause. When the cord is partially torn from its connections, the bleeding has been so free that the child has perished before proper means could be instituted for its arrest. As these cases, therefore, depend much for their successful issue upon the promptness with which means are employed to arrest the hemorrhage, their fatality is decided principally by this circumstance. Two of the three cases (77, 78,) here reported, proved fatal.

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* *Edin. Med. and Surg. Journal.* Vol. 38.

† *Med. Gaz.* Vol. 43.

Hemorrhage from the umbilicus, as it more often occurs, accompanied with symptoms of derangement of the liver, or a cachectic state of the system, is a disease of great fatality.

Radford says: "The result of umbilical bleeding in my practice has been invariably fatal, with the exception of the case (3) just related; and, from an extensive inquiry made amongst my professional friends, I have ascertained this to be the usual termination."

The period at which death takes place varies with circumstances; where the cord is violently ruptured, (case 77,) death may follow as quickly as in the most fatal form of traumatic hemorrhage, or it may be delayed to the 22d day, (case 67,) or even for weeks, (case 14.) Where life is so greatly prolonged, however, the hemorrhage from the umbilicus has rarely persisted, and the fatal termination has been due to the complication of purpura, (cases 14, 16, 65,) or some other disease, (case 15.) But the majority of cases prove fatal within forty-eight hours.

Treatment.—The great variety of measures resorted to for the suppression of umbilical hemorrhage is good evidence of the difficulty attending its successful treatment. The general failure of remedies, however, is due, not so much to any difficulty in their successful employment or application, as the condition of system existing which predisposes to the attack and which would render abortive any means adopted. The internal remedies therefore should constitute an important part of the treatment. These should be mild cathartics adapted to relieve the liver and portal circulation, and remedies addressed to the existing state of system. The former should not be omitted in any case, as costiveness and clay-colored stools is one of the earliest symptoms of that derangement of the liver, preceding jaundice and fatal hemorrhage; the latter are appropriate in purpura, the hemorrhagic tendency, &c. Of cathartics, calomel naturally suggests itself as best adapted to meet the indications; in addition taraxicum, sulphate of soda, &c., have been recommended;

of anti-hemorrhagic remedies, sulph. acid, muriated tincture of iron, gallic acid, &c., will be useful with stimulants and tonics to sustain, anodynes to quiet the system.

Compression is made with the finger, with a graduated compress, or with compressed sponge. Although the results of this method of treatment are not very flattering, yet, as it is easily applied and almost invariably arrests the bleeding temporarily, when combined with an astringent application, it is a valuable means. There seems to be little choice in the method employed, as pressure with the finger, a compress, or the sponge. Complete success may attend their first application, as in case (3), where a slight ulceration has unsealed a vessel; but generally they cannot be relied upon for a permanent arrest of the bleeding, unless used with styptics. Much of this failure is due to the yielding walls of the abdomen, which afford but slight resistance, and in spite of the firmest judicious bandaging, are constantly in motion from the crying of the child. Pressure by means of a lady's thimble is an ingenious method, and proved successful (24); scrapings of sole leather with compression (58) was also successful.

The *styptics* used are acetate of lead, sulphate of zinc, tannin, lead, alum, matico, solution of gun-cotton, turpentine, muriated tincture of iron, creosote, powder of nutgalls, etc., etc. These remedies have been employed alone, and with compression. They are beneficial when there is a granulating surface.

The *caustics* are the potential and actual. The nitrate of silver has been very often employed, but with very questionable advantage. When the eschar which it forms falls, the opening is made still larger, and the bleeding is still more free. The only way to use it even safely is in connection with compression or styptics (57.) The actual cautery has been used sufficiently to test its value, which is decidedly negative. In no case was it successfully used, while once (66) it seems to have greatly increased the hemorrhage.

The *ligature* yields by far the most satisfactory results.

In nearly all cases it has arrested the hemorrhage, although the patient may have subsequently died from the persistence of the constitutional disease. It is, indeed, the measure which we should rationally suppose would be most apt to succeed, as from the nature of the hemorrhage it is necessary to secure all the umbilical vessels firmly and permanently. Where there is a fungus growth it is best treated by drawing it out, and applying a ligature directly at its base (51), or by the use of styptics and compression.

Other means have been used, as plaster of Paris (37,65,69), injections of the umbilical vein with perchloride of iron (31), and the immediate ligature of the bleeding vessel. These measures are of very doubtful propriety, for, if positive injury is not done, valuable time is certainly lost. The plaster of Paris is a most mechanical invention, and illy adapted to secure the permanent closure of the umbilical vessels. An injection of the umbilical vein with the perchloride of iron was performed by Dr. Otis, of Virginia (31), and seems to have temporarily arrested the hemorrhage. The ligature of the bleeding vessel, as recommended by Radford, was recently attempted by Mr. Willing (37), but unsuccessfully. Considering the condition of the vessels, and the frequently ulcerated state of the umbilicus, we must regard this as an ill-advised operation, and liable to do injury by the exploration necessary to find the vessel. In regard to treatment we conclude :—

That mild but active cathartics, and anti-hemorrhagic remedies, are of the first importance.

That compression and styptics are useful for the temporary arrest of umbilical hemorrhage, but rarely effect a permanent cessation.

That cauterization is injurious except in connection with compression.

That ligature of the umbilicus, *en masse*, with two needles transfixing it at right angles, offers the best chance of permanently arresting the hemorrhage.

NO.	SEX.	HISTORY.	CORD FELL.	DATE OF HÆM.	SYMPTOMS.	TREATMENT.	RESULT.	AFTER HÆM.	AUTOPSY AND REMARKS.	REFERENCE.
1	F.	Child stout & healthy.	6th d.	15th	Third day after birth became jaundiced; this state continued till death.	No mention made of any treatment in the case.	Died.	2 d.	Umbil. vein patulous, but empty; arteries open and contained grumous blood; liver full and firm; ducts pervious.	DR. CHEYNE'S *Ess. on the Diseases of Children. Essay 2d*, 1802, p. 8.
2	....	....	7th d.	7th	....	Graduated compress; roller and adhesive strip.	Died.	12 h.	Navel sloughy, ragged, dark-colored; vein uncontracted.	MR. RADFORD, *Ed. Med. & Sur. Jour.*, vol. 38.
3	....	....	8th d.	8th	Bled on removing dressings in which cord separated.	Compress and adhesive strip.	Recov'd	......	....	*Idem.*
4	M.	Second child, feeble, jaundiced, refused to nurse.	sep.	......	....	....	Died.	......	....	MR. RAY, *London Med. Gaz.*, vol. 34.
5	M.	Same parents; healthy at birth; soon jaundiced.	sep.	......	....	....	Died.	......	....	*Idem.*
6	M.	Same parents; healthy well formed, but icterode on third day.	6th d.	10th	Fine undulat'g stream from left to right side; blood bright red.	Zinc oint. on matico leaves, compress with Ruspini's styptic, turpentine, failed. Tried ligature, but bled from puncture.	Died.	46 h.	Umbilical vein, duct and arteries open, but not where tied; fine probe entered vein, which was empty; fibrine in right artery, seemed to be a dilation of arteries like a sac, preventing retraction.	*Idem.*
7	F.	Healthy, but soon icterode; former child had jaundice.	......	11th	Slight but steady oozing, jaundice intense, purpura over body.	Compress and bandages.	Died.	28 h.	Tissues all tinged with bile; umbil. vein open, other vessels closed; gall bladder distended. Com. duct ending in cul-de-sac.	DR. ANDERSON, *Bost. Med & Sur. Journal.*
8	F.	First child, healthy, well formed, labor natural.	3d.	14th	Slight oozing several days; navel healthy; purpura came on.	Compression with finger, lint, spunk, zinc, caustic, single ligature through navel. Passed two needles and ligature.	Died.	6 d.	Bloody dejections from bowels.	DR. BOWDITCH, *Am. Jour. Medical Sci.*, Jan. 1836, p. 63.

9	M.	Same parents; large, well formed; bowels costive, urine yellow.	5th	10th	Purpuric spots seen on 10th; navel spongy; oozing of blood.	Compression, tannin, spunk, calomel, oil, salt; actual cautery failed.	Died.	4 d.	Ecchymosis over elbow and occiput; navel natural; vessels closed; liver large, yellow, flaccid; gall bladder small, contracted, empty.	*Idem.*
10	F.	Jaundiced on second day; third child; others healthy.	5th	9th	Urine brown; stools light colored; bleeding after a fit of coughing.	Caustics, compression, acted temporarily.	Died.	10th	Internal organs yellow, except liver, which was soft and full of bile; excretory ducts of liver and gall bladder absent.	Dr. Campbell, *Northern Jour. of Med.*, vol. 1, p. 237.
11	M.	Jaundiced on 3rd day; third child; others healthy.	5th	7th	Hemorrhage continued until 11th day.	....	Died.	11th	....	*Idem.*
12	M.	Same parents; fourth child; jaundiced on 3rd day.	6th	7th	Slight oozing.	Compression and astringents; acted temporarily.	Died.	11th	Internal organs bright yellow, except liver and spleen; navel healthy; gall bladder partially filled with bile; common duct plugged with inspissated bile.	*Idem.*
13	M.	Healthy at birth; icterus followed.	5th	14th	Slight oozing at first.	Nit. arg. pressure with comp. and finger, actual cau., alum, mati.	Died.	48 h.	....	Dr. John Manley, *Lond. Med. Gaz.*, 1850, p. 755.
14	M.	Delicate.	5th	11th	....	Ice, colophony, compression with finger and spunk, nit. argent. failed. Transfixed tubercle with pin and wrapped double thread; bleeding ceased.	Died.	5 w.	Umbilicus healed, vein and left artery obliterated, right admitted probe; orifice in right side of tubercle, from which bleeding took place; purpuric spots in mouth; blood in stomach.	P. Dubois, *Arch. Gén. de Méd.*, Oct. 1849, and *Va. Med. and Surg. Jour.*, Oct. 1853.
15	M.	Healthy.	7th	8th	Ulceration in centre of navel; bleeding free, without impulse.	Pressing with finger, caustic, spunk; colophony failed. Ligature *en masse* with two needles checked it.	Died of enteritis.	12 d.	Umbilical vein and duct venosus collapsed, not obliterated; arteries nearly obliterated.	A. Dubois, *Op. Cit.*
16	M.	Purpuric spots on skin.	......	14th	Hemorrhage slight; serous; but purpura, diarrhœa and stomatitis came on.	Compression, alum, caustic, &c., controlled bleeding after six days.	Died.	24 d.	Umbil. nearly cicatrized; artr. full of pus and coag., open, vein empty, collapsed; ductus arteriosus nearly obliterated.	M. Thore, *Gaz. Méd.* 1848, p. 191.

17	M.	Parents healthy, child plump and healthy.	3d	5th	Jaundice, ulceration of navel, hemorrhage from bowels.	Compression with shavings of sole-leather.	Died.		Bleeding not severe, child apparently sunk from hemorrhage from bowels. No P. M. exam.	Communicated by DR. S. S. PURPLE.
18	....	Mother had hemorrhagic diathesie.	......	......	Inflammat'n of umbilical vessels, scrotum, bladder, testicle, purpuric spots.	....	Died.	3 d.	....	*Gaz. Med. de Paris.* 1842, p. 105.
19	F.	Mother feeble, father healthy, child feeble.	6th	6th	Bled freely, soon after had oozing from the mouth and gums, and vomited blood.	Hemorrhage tempor'ly checked by astringents—as alum, matico and catechu.	Died.	7th	Not made.	DR. F. F. AMYOT. *Lond. Med Times,* 1850, p. 449.
20	F.	Not given.	6th	6th	Oozing soon after separation of cord.	Vinegar and water, spunk and compression, actual cautery failed. Passed needle through navel, and applied ligature.	Recov'd	......	Ligature separated on the 4th day; afterwards died of purpura.	DR. JEUNNIN. *Jour. des Connais,* 1847.
21	M.	Mother had syphilis two years before; child had eruption; feeble.	......	8th	Bleeding from left navel and scrotum, at first; three days after from skin.	Not given.	Died.	5th	Very marked case of syphilitic cachexia.	DR. EVERT, *Zrit. fur gesam. Med.*
22 23		Not given.	sep.	......	Jaundice.	Pressure, astringents. escharotics & twisted suture.	Died.	......	....	DR. E. J. MARSH, *N. J. Med. Rept.* vol. 1., p. 181.
24	....	Not given.	8th	14th	Navel white, flaccid; oozing constant.	Styptic and compresses used four days without success. Applied a closed lady's thimble over tubercle, with pressure.	Recov'd	......	Thimble became fill'd with blood and checked flow; cicatrized readily.	DR. WM. GALE, *Western Lancet,* Sept., 1853, p. 552.
25 26	....	Not given.	......	......	Not given.	All means failed.	Died.	3d d.	Not given.	M. RICHARD & VILLENEUVE. *Gazette Med.* 1848, p. 191
27 28	....	Twins; delicate.	7th	10th	....	Ligature *en masse.*	Died.	......	Born at 8½ months.	M. DANYAU,—*L'Union Med., & Va., Med. & Sur. Jour.,* Oct., '53.

29	M.	....	6th	8th	Hemorrhage profuse.	Compress of lint and bandage.	Died.	2d	Arteries open, retracted beyond pressure; clot of blood in right; vein size goose quill; full of liquid blood.	A. DUBOIS, *These de Paris*, and *Va. Med. & Sur. Jor.*, Oct., 1853.
30	F.	Small, well formed; had diarrhœa 12 days, skin blue and cold.	......	13th	Bleeding slight, diarrhœa continuing.	Nit. argent. compression, spunk, alum, actual cautery.	Died.	2nd	No jaundice or ecchymosis; arteries open, full of blood; foramen ovale and duct open; vein closed by a clot.	DR. ROGER. *L'Union Med.* '53, & *Va. Med. & Sur. Jour.*, Oct. 1853.
31	M.	Small, well formed; icterus on 3rd day; parents healthy; labor easy.	7th	4th	Intensely jaundiced; face wrinkl'd and sad, lips pallid, ecchymosis on palate, pulse rapid and small, blood flowed from centre of navel, stools bloody, purpura well mark'd.	Alum, acetate of lead, cold baths, fur, *serre-fine*, matico, sulph. cupri failed; perchloride of iron injected into vein, acted temporarily; gave tr. ferri. mur. in large doses; passed two needles at rt. angles and wound thread.	Died.	2nd	No bleeding occurred after the ligature was applied, a period of 18 hours.	DR. G. A. OTIS, *Va. Med. & Surg. Jour.*, Oct. 1853.
32	M.	Parents and child healthy; weight 9lbs.	7th	30 h.	Blood oozing from navel, did not coagul'te; dischar. from bowels natural.	Sulph. cupri arrested flow 24 hours; on its return styptic applications and tr. ferri. mur. in large doses, with brandy, restored patient's strength, & checked bleeding.	Died.	8th d.	Hemorrhage commenced on 2d day before separation of cord, and proved fatal 2 days after its separation.	DR. S. S. WHIPPLE, *Am. Jour., Med. Sci.*, Oct., 1854, p. 318.
33	M.		6th	8th	No. 32.—Had bled all night; no distinct point discov'ble from which blood came; navel healthy.	No. 33.—Compress of lent, adhesive strip and bandage; perfect quiet.	Died.	27 h.	No. 33.—Umbil. vein full of fluid blood; arteries admit probe; left contained a plug; both retracted beyond pressure.	G. POUT, ESQ. *Med. Chir. Trans.* vol. 12.
34	....	Same parents; No. 33 healthy.	......	......			Died.	......		
35	....		......	......			Died.	......		

36	F.	Father syphilitic, child feeble.	Sep.	6th	Third day after birth became jaundiced; had also purpura hemorrhagia.	Sulph. cupri, tannin, compression.	Died.	10th d.	Child emaciated and covered with purpura; no autopsic examination allowed.	Communicated by Dr. S. S. Purple.
37	....	Mother healthy; third child; labor easy; refused to nurse; stools white.	7th	13th	On 2d day jaundiced; stools like curdled milk; condit'n much improved with purging; navel healthy where cord separat'd; oozing slight at first; blood did not coagulate.	Matico, tannin, graduated compress, nit. argent., alum, efforts to take up vessels; plaster of Paris, with pressure of finger, &c. failed; ferri. mur. & cobweb, with pressure; no bleeding after; stimulants internally.	Died.	4th d.	Surface yellow and blanched; limbs well formed; liver gorged with blood; umb. vein open its whole length; small coagulum in its orifice; left artery pervious, filled with fluid blood, right closed; duct. art. and vein open; blood very fluid, and did not coagulate.	G. F. B. Willing, Esq., *Med. Times & Gaz.* March 25 1855.
38	....	Mother healthy; labor easy.	......	......	......	......	Died.	......	......	Dr. A. Hooker. *Am. Jour. Med. Sci.*, Oct., 1852. p. 316.
39	....	Same parents.	......	......	......	......		......	......	
40	....	Same parents.	......	......	......	......	Died.	......	......	
41	....	Same parents.	......	......	......	......	Died.	......	......	
42	....	Same parents.	......	......	......	......	Died.	......	......	
43			......	......	Jaundiced.	......	Died.	......	......	*Idem.*
44	....	Twin; feeble.	......	2d	......	......	......	......	......	
45	....	......	......	......	......	Plugged the navel in both.	Died.	......	The navel seems to have been plugged with plaster of Paris.	Dr. W. Read, *Ibid.*, p. 315.
46	....	......	......	......	......		Died.			Dr. Churchill. *Op. Midwifery*, p. 286.
47	....			......				......		
48	....	Same parents; have two healthy childr'n.	sep.	......	Came out in purple spots before death.	......		......	Treated by Drs. Key and Babington.	E. Ray, Esq., *Lond. Med. Gaz.* vol. 43, p. 243.
49	....			......		......	Died.	......		
50	....			......		......		......		
51	....	......	......	......	Hemor. from a granulating fungus.	This fungus was drawn out and ligatured.	Recov'd	......	Treated by Dr. Blundell and Sir C. Clarke.	Mr. Sterry. *Ibid.*, p. 428.
52	....	Large and vigorous.	......	......	Purpura.	......	Died.	......	First symptom extravasation on the eyelid.	Dr. F. Minot, *Am. Jr. Med. Sci.* Oct. 1852, p. 317.

53	....	Mother delicate; liable to menorrhogia. No. 55 fair, almost white.	......	......	No. 55 had jaundice, apthæ, diarrhœa, convulsions; blood constantly oozed from cord and from umbilicus; scrotum purple.	Bleeding resist'd every varity of styptics.	Died.	8th d.	These parents had three other children, who, though delicate, exhibited no hemorrhagic tendency.	*Med. Chir. Rev.*, vol. 25, from *Jour. der Pract. Heilk.*
54	....		......	......			Died.	12th d.		
55	....		......	......			Died.	14th d.		
56	M.		sep.	......			Died.	9th d.		
57	M.	Child healthy.	9th	6th	Constant oozing.	Pressure, styptics, compress and bandages, failed; arrested by nit. argent. and compressiou after funis separated.	Recov'd	......	Hemorrhage commenced from the extremity of the funis.	Dr. John Homans, *Bost. Med. & Sur. Jour.*, vol. 40. p. 449.
58	F.	Child apparently healthy; funis left a good surface.	4th	4th	Hemorrhage profuse, bloody passages, sallow skin 5th day.	Compression, styptics, nit. arg., &c., failed; arrested by scrapings of sole leather and firm bandages.	Recov'd	......	Became strong and vigorous; when six years old had jaundice, but recovered rapidly.	*Idem.*
59	M.	Child remark. healthy in appearance.	5th	6th	Hemorrhage very free, on 8th day child became sallow.	Compression fail'd; arrested by nig. argent. and solution of gun cottou.	Recov'd	......	Hemorrhage recurred twice, but arrested by the solution; navel inflamed and swelled like hernia; perfect recovery	*Idem.*
60	F.	Child well formed, apparently healthy.	5th	18th	Hemorrh. not severe; on 21st day skin sallow, with purpuric spots; bleeding from gums.	Compresssion and nit. argent partially arrested the bleeding.	Died.	5th	Ecchymosis formed around the navel after application of caustic.	Dr. Steph. Ball, *Ibid.*
61	M.	Child plump; had colic and green passages.	......	5th	Hemorrhage from a point one-fourth the size of calibre of funis; jaundice gradually came on.	Compression, pressure with finger, ice, creosote, powder of nutgalls, nit. argent., actual cautery, solution of gum shellac in alcohol, turpentine, tr. ferri. mur., all failed.	Died.	......	Pressure with finger arrested hemorrhage 12 hours; child nursed well; purpuric spots noticed on 2d day.	Dr. H. H. Rising *Ibid.*

63		Parents healthy; funis large and twiged, had diverticula; its circulation distinctly he'rd during pregnancy.	Not sep.	1st	Bleeding from funis, with pulsation, 4 days; on 4th day from navel; eyelid œdematous, finally trunk; spots of stony hardness in limbs.	Compression & various stypt. employed without the slightest advantage.	Died.	5th	Surface yellow; purpuric spots on eyelid, ankles and vulva; effusion of blood into lungs and intestines, no clot in heart or umbil. vessels; arteries traceable into funis; blood pale and thin.	Dr. Putnam, *Ibid.*
64	M.	Parents healthy, child healthy in appearance; purpura on 2d day.	5th	5th	Hemorhage from umbilicus as soon as cord fell; ecchymosed on 2d day.	Not given.	Died.	few hours	Ecchymo. first appeared around navel, then over the whole body.	Dr. Channing, *Ibid.*
65	....	Child doing well, except it had icteric hue.	5th	8th	Slight oozing at first; purpuric spots on elbow on 10th day.	Compress and burnt alum, tannin, plaster of Paris, nit. argent., rice, creosote, matico.	Died.	2d	No post-mortem.	Dr. T. F. Cocke, *N. Y. Annal.*, vol. 2, p. 189.
66	M.	Parents healthy; 2nd child, and healthy; 5th day bowels costive; stools clay-colored; labor easy.	3d	9th	Hemorrhage slight at first; on 10th day free; fine pulsatile jet from left to right; bled from even pricks of a pin.	Acetate and tannate of lead, sulph. zinc, nit. arg., actual cautery; all seemed to increase the flow.	Died.	2d	Surface of body very yellow; actual cautery increased the hemorrhage four-fold; ecchymosis in abundance.	Dr. W. C. Bailey, *Am. Jor. Med. Sci.* April, 1852.
67	F.	Same parents, 5th child and healthy; 8th day stupid; costive, stools clay-colored.	4th	9th	Hemorrhage free; became jaundiced, and on 17th day purpura appeared.	Matico leaf and bandages, alum, &c., mild purgatives, tonics internally; arrested by needles and ligature.	Died.	22d	Ligature separat'd on 19th day, and left a good cicatrix; bleeding began in mouth, and recurred at umbilicus.	*Idem.*
68	....	....	......	......	Percolation around root of cord at place of attach. to abdomen.	Arrested by powder of starch, sugar and acetate of lead constantly added.	Recov'd	......	....	Dr. Condie, *Treat. on Dis. of Children*, 3d Edit., p. 636.
69	....	....	......	......	Same symptoms as last.	Same treatment.	Died.	......	Blood flowed too freely to allow paste to harden.	*Idem.*

70	M.	Fourth child healthy; 3d day icterode; labor easy.	Not.	......	Jaundice over whole body; costive; clay-colored stools.	Hemorrh. ceased spontaneously.	Died.	......	No post-mortem.	*Idem.*
71	M.	Child healthy; vomit'd often.	Not.	3d	Hemorrhage slight.	Nit. argent; ligature around umbilicus.	Died.	......	....	Dr. Keiler. *Monthly Jour.*
72	....	....	Not.	8th	Bled five hours before seen.	Compress and bandage failed; arrested by plaster of Paris.	Recov'd	......	....	Mr. Hill, *Dub. Med. Press.*, vol. 52, p. 556.
73	....	Former child of these parents died of purpura and jaundice on 5th day.	......	......	Hemorrhage preceded by jaundice and purpura.	Not given.	Died.	8th	No autospy.	Dr. G. R. Smith, *Bost. Med. & Sur. Jour.*, vol. 4, p. 441.
74	M.	First child had ichthyosis; this had same disease of skin; became jaundic'd, stools clay-colored.	5th	9th	At first hemorrhage slight, oozing, finally escaped in a fine jet; blood pas. per anum.	Compress and tannin, nit. argent., ligature around a portion, alum, collodion, direct pressure.	Died.	3d	Umbil. vessels pervious; liver dark and friable, gorged with blood; cystic and common ducts closed; gall bladder of serous fluid.	Dr. Gould, *Am. Jrl. Med. Sci.* April, 1854.
75	....	Not given.	sep.	3d day after sep.	Hemorrhage free.	All means failed	Died.	1 d.	Probably an imperfect closure of vessels from non-coagulation of blood.	Dr. Hayward, *Ibid.*, 1850, p. 69.
76	M.	Parents healthy; labor easy; fourth child, healthy.	Not.	5th	Hemorrhage very profuse; cord ruptured;	....	Died.	20 m.	Cord torn off by nurse, just before its separation.	Dr. Lewis A. Sayre, Comm.
77	....	Mother had syphilis; child born at 7 mon.	5th	5th	Hemorrhage oozing.	Caustic, with tannin & compres., burnt alum, tr. ferri. mur.	Died.	2d	Plaster of Paris used, but not so as to test its virtue.	*Occurr'd in Bellevue Hospital.*
78	M.	Second child; parents and child healthy.	Not.	4th	Hemorrhage free; arterial from left side of cord at its attachm'ts	Nit. argent. tannin and compress arrest'd flow temporarily.	Died.	1 h.	Child exhausted when first seen; crying excited return of hemorrhage.	Author.
79	F.	Parents and child healthy; first child.	Not.	2d	Constant oozing.	Compressed sponge on tannin, with adhesive strip extend'g around body, arrested it temporarily; gave sulph. acid and iron, brandy, &c.	Died.	10 h.	Hemorrhage recurrred during the night, and child died without being observed.	Author.

PART SECOND.

CRITICAL ANALYSIS.

ART. V.—*Clinical Lectures on the Diseases of Women and Children.* By GUNNING S. BEDFORD, A.M., M.D., Professor of Obstetrics, the Diseases of Women and Children, and Clinical Midwifery, in the University of New York. 8vo. pp. 563. Samuel S. & W. Wood. New York. 1855.

OUR attention was first attracted to these Lectures by the novelty of the enterprise, in the success of which we had not much confidence; and it is partly from having withheld our encouragement that we are now induced to state our opinion of the results. We were, however, by no means alone in this distrust, and there were probably none who did not regard the undertaking as an experiment that would be required to encounter many difficulties. We think that our author has fairly represented this at page 72. Nevertheless, the work went on; grave and venerable matrons brought their daughters and little ones to the clinic in such increasing numbers that they soon exceeded the Professor's ability to dispose of the cases in the allotted time of two hours; and the lectures became frequented by many practitioners in the city, and by students attached to the other schools. The experiment came out triumphantly, and proved to the world that knowledge and humanity in pursuit of lofty and sacred objects may overcome what would be otherwise, offensive to common modesty. The Professor has demonstrated that human suffering in any form may be rendered the subject of chaste and enlightened instruction in a practical manner; and it is a consciousness of this honesty of purpose, and confidence in the uprightness of those who come to learn, which has divested his lecture-room of all repulsiveness to the sensitive female who may desire the benefits offered by skill and benevolence. A principle which he lays down, and is amply followed out in his comments, has, doubtless, been largely tributary to our author's success. In his intercourse with his female patients he says, "let the practitioner feel that he stands in the sanctuary of virtue, and his actions cannot fail to be in accordance with this sentiment:" page 77. And it may be supposed that he was not unmindful of another precept addressed to his audience, that "the poor, like the wealthy of this world, are subject to disease and suffering; and they, too, have their keen sensibilities. To allay these sensibilities, and smooth the pillow of the sufferer, laboring under the double affliction of disease and poverty, is the duty of the Christian; it should, too, constitute the happiness of the physician:" page 87.

We cannot, however, agree with our author in the propriety of the latitude which is sometimes indulged for the practical benefit of the students. But the great popularity of the clinics appears to render our explanation applicable to all the cases where delicacy is most in question. And, that the Professor manages all this with a becoming consideration, is further evident from the rebuke which he so wisely bestows upon the abuses of the speculum and touch, especially the former: pages 6 and 126–128. Nor will we neglect, in this connection, our author's reference to some of the frequent remote predisposing causes of "functional and organic derangements of the uterus, among which he enumerates, in graphic language,

"Abortions, precocious nervous excitement from the perusal of prurient books, the lascivious polka, and the various exciting scenes of city life, as so many influences which are constantly exhibiting their destructive results on the females of the gay metropolis; and add to these, the uninterrupted rounds of excitement consequent upon balls, parties, the opera, etc., the liability to cold, imposed by these amusements, and, more than all, the fact that these disastrous influences—disastrous to health and happiness—are exercised on a *physique*, too often without a single attribute of solidity, and you will at once have explained why it is that females in the higher classes of our large cities decay long before they have attained the meridian of life." Page 7, and again pages 98–100, 293, 294.

But Professor Bedford has done more than achieving the success of his clinics. He has more than taught us their practicability and usefulness. He has opened a new field in the periscope of medicine, where he will have no lack of followers, and has conferred a benefit upon humanity which the enlightened of future generations will not fail to acknowledge.

If we now look at the work before us, we shall find it, although only an abbreviation of his lectures, bearing ample testimony to the author's industry, talents, learning and benevolence. In whatever is practical, he has generally our concurrence, often our admiration; and this is the most immediately useful part of the work. In diagnosis, description of symptoms, pathological and remote predisposing causes, modes of investigation, and treatment, its value is of a high order, and generally unexceptionable. In all these respects, too, our author is ample in the most useful detail, nor avoids a minuteness where it may be suggestive in difficult problems or of habits of critical inquiry. Nor have we any thing but commendation for the style, which is chaste and classical, or for the preservation of its original colloquial manner, unless there may be to the mature physician a redundancy of interrogatories and of a conciliating deportment addressed to the patients. But it will be readily seen how much all this is tributary to the happiness and confidence of those who resort to this clinic for relief, how much it unfolds the diseases, how much it imparts the force of demonstration, and how much the example conducts the pupil into the proper methods of investigation, and awakens his kindness and sympathy. But our author often runs, with an agreeable facility, into the didactic style, especially in expositions of medical principles, or, as in the analysis which he makes of the structure of the uterus and its appendages: pages 135–143.

It will be thus seen that our author does not limit himself to the simple details of practical instruction. Far from it; for he constantly brings into application many of the great principles of the science, by which, indeed, however unconsciously, he is especially guided in his pathological and therapeutical views, and which never fail of actuating all, with rare exceptions, in the treatment of disease. Sound, in the main, in his philosophy, he occasionally departs from it to pay a tribute to the prevailing errors of the day. It is the former, however, as his book will show, which carries off his practice, and therefore, in a practical sense at least, the latter is ignored. But what most surprised us is the frequent introduction of those enlightened views in solidism and vitalism, which have yielded so extensively, in recent times, to the *long-exploded* doctrines in humoralism and physics; and it is this, especially, which has prompted us to look with diligence to the practical value of the work, and to express our humble opinion upon its merits.

It is impossible, however, to present an analysis of this storehouse of knowledge for the student of medicine, for it consists, in itself, of analyses of special cases, and of brief commentaries upon principles in medicine suggested by the circumstances of the individual cases. This is alike true of our author's instruction both upon the diseases of women and children, though much less remarkable for variety and skill in the latter respect than in the more complicated diseases of females. There is, unavoidably, much repetition where the cases present strong points of resemblance; but this is not the less valuable to the inquisitive student, on account of the peculiarities of every case, or even their shades of difference, which may be important to be understood, but often of difficult discernment. Occasionally, there is a useless repetition preserved in the work, which appears to have been the result of inattention; as in the instructions given for the management of infants as soon as born, their food, &c.

Our author's lectures are also peculiarly valuable for the importance which they ascribe to an exact knowledge, and the constant exemplifications, of the seats and sympathetic complications of disease, and in tracing effects to their proper pathological causes. Many very instructive examples occur in diagnosis, and the most ingenious and difficult show our author's complete dependence upon the philosophy of the vital solidist. Thus, for example, at page 45 is an instructive case of obstinate vomiting, occasioned by uterine hydatids.

> "Several medical gentlemen had already prescribed for the patient. When first seen by myself, in company with Dr. Whiting, she was apparently near dissolution. Her prostration was extreme; her countenance almost Hippocratic; and, indeed, her friends had abandoned all hope of recovery. The medical gentlemen who had preceded me in attendance, had ordered cups, leeching, blisters, &c., over the region of the stomach, with various other remedies, but all without the slightest appreciable effect." Our author "arrived at the conclusion that the vomiting was merely a symptom of trouble elsewhere than in the stomach, and that no remedy addressed to that organ would be of the least avail in rescuing the patient from the imminent peril in which she was placed. On applying my hand to the abdomen, I found the uterus enlarged, and occupying the hypogastric region." "My opinion was, that the vomiting was sympathetic, and produced by irritation of the uterus. I therefore suggested the propriety of endeavoring to induce contraction of this organ, that its contents might be expelled. This view was concurred in by Dr. Whiting. Accordingly, at Dr. Whiting's request, I introduced a female catheter into the uterus. In a short time the organ contracted, and a mass of hydatids was thrown off. Almost immediately, as if by enchantment, the vomiting ceased. The patient had a slow recovery, and is now in the enjoyment of robust health."

Our author then remarks: "Let this case impress on you the importance of tracing effects to causes; and remember this cardinal truth, that the practitioner who prescribes for mere symptoms, (and our author has several cases illustrative of this,) can never hope to treat disease successfully." And may we not add that success can never be attained but through an enlightened knowledge in physiology as the groundwork of all the rest? But this case, like a parallel one from congestive dysmenorrhœa at page 112, is only conspicuous in that respect. A multitude of others, more obscurely but not less essentially dependent upon the laws of sympathy, are constantly presenting themselves in our author's work, and where, without the same guiding philosophy, all practice is a poor substitute for unaided nature. It is all for the symptoms, or for some peccant humor, or aspires at converting morbid blood and diseased solids into their normal state by chemical processes, when these very philosophers, profound as they may be in other departments of science, will readily concede that the original normal state was the work of an elaborate system of organization, and acting upon materials totally different from the chemical agents by which they are supposed to be replaced.

Analogous to the foregoing, but presenting other aspects of our author's philosophical habits, are the enlightened comments upon a case of ulceration of the neck of the uterus, at pages 124–126, where the physiological influences of the nervous system in developing sympathetic diseases are well expounded; and here our author treads heavily upon the usurpations of the chemist, and laughs at the humoralist, by tracing the formation of urinary lithates to the laws of vital-solidism. Thus our author:—

"There is one feature in this case with which is associated a very important and interesting fact; the character of the urinary deposit. Patients will frequently consult you on this subject, and if you regard the urinary deposit as a disease *per se*, if you connect it with some idiopathic affection of the kidneys, you will often err in judgment, and fail to benefit your patient. Lithates are not uncommon in the urine of females, and if your observation be directed to this point, you will discover that they are often the indirect result of disease of the womb. This character of deposit is one of the evidences of impaired digestion. In diseases of the uterus, either functional or organic, this impairment, I have already said, is apt to follow through the operation of the *trisplanchnic* system of nerves. You see, therefore, how manifestly important it is, before having recourse to therapeutic measures, to ascertain where the cause and effect exist." And so of a similar, maltreated case, at pages 383–386.

At another time, in recurring to the subject of ganglionic influences in the production of disease, we have from our author a practical suggestion which is predicated of the true philosophy of the peristaltic movements of the intestines. After speaking of many other sympathetic results of the gravid uterus, our author says:—

> "I believe that to a certain degree the constipation so common in pregnancy may be explained in the same way, the regular action of the intestinal canal being modified in consequence of a want of healthy *nervous power* from the ganglionic nerves. This, at all events, in my opinion, is the true explanation of torpor of the bowels in the earlier months of gestation; and I therefore am disposed, as a general rule, to regard constipation as an accompaniment of pregnancy for the same reason that I do nasuea, vomiting, &c., irritation of the ganglionic system of nerves. But, at a later period of pregnancy, there is an additional cause brought into operation—pressure of the uterus against the intestine, &c.:" page 146.

On the other hand, another peculiarly modified irritation of the ganglionic nerves, induced by pregnancy, will lead to diarrhœa, the nervous power then operating, as in the case of vomiting, as a stimulus to the organic properties of the intestinal muscular tissue: page 147. The treatment must depend upon the special causes, remote and proximate.

Or consider the comprehensive philosophy involved in a few words of our author's excellent comment upon a case of "sub-mucous fibrous tumor of the uterus in a married woman, &c.," at pages 217–224.

> "The emaciation here is the result of local disease—the nerves of organic life, whose healthy influence is so essential to the maintenance of the nutritive functions, have suffered impairment from the diseased condition of the uterus, and hence they have been unable to transmit to the digestive organs their proper supply of nervous power. How often have you seen this principle exemplified in the Clinique, both in functional and structural disease of the uterus! It is a principle which those of you who intend to make a specialty of the maladies peculiar to women must have constantly before you. Often will it prove a faithful guide, and enable you to reach the truth which, without it, would be unattainable. It is not improbable that the patient herself, as well as her friends, imagine that the emaciation is the absorbing feature in the case—and with this view, their therapeutics would consist in the administration of tonics to generate an appetite, etc. But to you, this decay of structure presents a very different aspect—it is the effect of a disease, which alone is to occupy your attention; and if you can succeed in arresting it, then the nutritive functions will be the recipients of healthy nervous influence—digestion will be improved, and the patient will gain flesh and strength. This, at least, is the fair reasoning in the case—reasoning, which all experience proves to be correct:" page 220.

It is not remarkable, however, that our author, in his devotion to his favorite department, and in the midst of so great a variety of complications of disease, should sometimes regard the uterine derangement as the primary sympathetic cause, when it has been only one of the remote consequences of other lesions of function. We think that such misapprehension occurs in the interesting case of "threatened paralysis," at pages 208–210, and that of "suppressed menstruation and periodical hemorrhoidal bleeding," at page 337, the latter of which we should refer to hepatic congestion. These instances, however, are rare; and for these our author may plead the example of his distinguished teacher, the Baron Louis, who refers all the structural lesions that ever happen in typhoid fever to a primary affection of Payer's glands, yellow fever to hepatic disease, and the intermittent to troubles of the spleen.

We shall continue to follow our author in his medical principles, because we find them most usefully associated, as a natural result, with his expositions of about all the cases that make up his valuable contribution to the healing art. We may not neglect saying, therefore, that the humoral pathology, as far as our author's facts and philosophy are concerned, gets many blows from examples of lactation and mammary abscess; and chemistry and filtration have a very sorry chance in their presence, especially when our author speaks of the effects of mental emotions in altering the qualities of the milk, and which is illustrated by a case of infantile purging and convulsions, at page 423–426; and again when he descants upon the influences of the uterus, habit, &c., in variously affecting the production of milk. The simple element of the whole may be constantly seen in the only philosophy which can interpret the various and sudden changes brought about in the product of a suppurating surface by mental emotions, gastric and intestinal derangements, cathartics, exercise in the open air, &c.; and this is extensively applicable to all other secretions.

Many prevailing errors in practice are corrected, which are often accompanied by suggestions that point the attention of the student to profound problems in physiology, which, if he follow out, will induct him far into the labyrinth of a sound philosophy of life and disease. These instances sometimes begin in slight matters. Thus, at page 199, our author, when objecting to the usage of applying two ligatures to the umbilical cord, is led to assign the reason, which brings into view the whole proper philosophy of decarbonization of the blood, both in the lungs and the placenta, and how the phenomenon as taking place in the latter is tributary to a just interpretation of the former.

We would also commend to the attention of the student two difficult and well-authenticated cases in diagnosis of a very different character from such as we have already quoted; one of concealed pregnancy, the other of mistaken pregnancy. They occur at pages 48 to 53, and abound with important instruction even to the mature of the Profession. The narrative has also the advantage of being affectingly true to nature, and the cases are presented, without any apparent design of our author, in powerful contrast with each other.

At pages 248–251 is a very clever, and if we may say so, admirable diagnosis of a case of "imperforate os tincæ and retention of the menses," which exemplifies our author's skill and the practical richness of his instruction. Other, and similar cases occur at pages 297–299, and pages 318–321, the latter of which presents the interest of having occurred in a woman who had borne two children; and a successful issue of an operation in this case may be seen at page 376. These dexterous achievements in diagnosis were made and verified in the presence of the class; and perhaps it may be conceded that the great practical benefit arising from a thorough investigation of obscure forms of dangerous maladies justifies the full extent of our author's critical instruction. There seems not to have been any thing lost to modesty, while it cannot be doubted that much was gained to knowledge and humanity. There is much of this where obscurity prevails, and where a great compensation obtains, though it may be mostly important in the aspect of diagnosis. This, for example, is true of the interesting case of uterine flatus, which follows immediately the last of the foregoing, pages 321–325; and at page 377 may be seen the successful result of the instrumental treatment. To this class of cases, only far more practically important, belongs a very complicated one of "*complete occlusion of the meatus urinarius, with adhesion of the walls of the upper fourth of the vagina, together with vesico-vaginal fistula, produced by instrumental delivery,*" requiring three distinct operations at as many distinct periods, and where our author exhibits his happy facility of rendering a special case the groundwork of important and diversified information: pages 346–355.

So far, and in all the analogous cases of difficult diagnosis and treatment, we think that our author has established a claim to the thanks of the Profession for the responsibilities he undertook in its behalf, and where, too, he had been discouraged from the enterprise. Even in such instances as that of the abscess, at page 340, and of chancre, at page 419, and of infiltration, at page 406, much practical benefit may result from the demonstrations made; but here it is more a question as to the propriety of its full extent. If all minds were as pure as our author's, we might not raise an objection. In any event, it must be conceded that our author has a remarkable facility in obtaining the onfidence of female patients.

We are not disposed, however, to rest here, but would indicate still further the excellent variety in the work before us. Of a still different character from the foregoing is an inquiry into the various internal causes of chorea (page 116); and at pages 104–105 is a profitable example in diagnosis of internal causes of cough, where the malady was "sympathetic from intestinal worms," with an explanation of the philosophy; while this may be contrasted with another case of troublesome cough depending upon "pressure of the gravid uterus against the diaphragm," when the patient was in a recumbent posture (page 180); with appropriate comments in all the cases upon the corresponding varieties in treatment. And here may be usefully considered and compared with the foregoing the enlightened commentary upon a case of *catalepsy* resulting from an "engorgement of the uterus," which had grown out of a complex series of remote influences: pages 331–337. This patient returns cured at page 378. In connection also with the foregoing cases, that of hysteria, at pages 368–374, and the variety of comment to which it leads, may very usefully engage the attention of the student, not only for its practical but its theoretical interest. And of an analogous nature are the enlightened disquisitions upon "globus hystericus," &c., at pages 236–241; and again upon the remote internal and proximate causes of infantile convulsions, and other diseases of infancy, and how the treatment should be determined accordingly; as at pages 36–37, 195–198, 212–217, 287–290, 450–456. "In my judgment," says our author, "the advances of *Physiology*, though recognized in almost every department of the Profession, are in no particular more strikingly illustrated, than in the light they have shed on the nervous diseases of infancy:" page 450.

It will be seen that we have hitherto referred to only such cases as were introduced to the class in attendance upon our author's lectures, when the prescriptions were made, and the accuracy of our author's diagnosis confirmed by highly interesting, and sometimes startling demonstrations. We are therefore prepared to render to our author full credit for the five or six cases embraced in his work, which occurred in his private practice. Of this number it is but just to our author that we should quote an example, and we are sure that the reader will be gratified with the following pathetic story of a clergyman's daughter, which will serve, also, to exhibit the importance of accuracy in diagnosis.

Thus, our author:—

"I was requested to visit a lady who was residing in the State of New Jersey, about thirty miles distant from New York. I immediately repaired to her residence, and on my arrival was received by her father, a venerable and accomplished gentleman. He seemed broken in spirit, and it was evident that grief had taken a deep hold of his frame. On being introduced to his daughter's room, my sympathies were at once awakened on beholding the wreck of beauty which was presented to my view. She was evidently laboring under phthisis, and it was manifest from her wasted frame that death had claimed his victim. My presence did not seem to occasion the slightest disturbance, and with the smile of an angel playing on her countenance, she greeted me with these words: 'Well, doctor, I am glad to see you on my beloved father's account, for he will not believe that I cannot yet be restored to health. Life, however, has lost all its charms for me, and I long for the repose of the grave.' These words were spoken with extraordinary gentleness, but yet with an emphasis that at once gave me an insight into the character of this lovely woman.

"Her father was a clergyman of high standing in the English Church, and had a pastoral charge in England, in which he continued until circumstances rendered it necessary for him to leave that country, and seek a residence in America. At a very early age, this young lady had lost her mother, and had been almost entirely educated by her father, whose talents and attainments admirably fitted him for this duty. When she had attained her eighteenth year, an attachment was formed between her and a young barrister of great promise and respectability. This attachment resulted in a matrimonial engagement. Soon after the engagement, she began unaccountably to decline in health. There was considerable irregularity in her menstrual periods, with more or less constant nausea, loss of appetite, inability to sleep, feverishness, and an uncontrollable dislike to society. In addition to these symptoms, there was a marked change in her personal appearance; her abdomen became enlarged, with increased size of the breasts, etc. These changes attracted the attention of some of her female acquaintance, and the rumor soon spread that they were the result of pregnancy.

"The barrister to whom she was affianced heard of these reports, and, instead of being the first to stand forth as her protector, and draw near to his heart this lovely and injured girl, thus assuaging the intensity of grief with which she was overwhelmed, addressed a letter to her father, requesting to be released from his engagement. This was of course assented to without hesitation. The young lady, conscious of her own innocence, knowing better than any one else her own immaculate character, and relying on Heaven to guide her in this her hour of trial, requested that a physician should be sent for, in order that the nature of her case might be fully ascertained. A medical man accordingly visited her, and, after an investigation of her symptoms, informed her father that she was undoubtedly pregnant, and that means should be instantly taken to keep the unpleasant matter secret. The father, indignant at this cruel imputation against the honor of his child, spotless as he knew her to be, spurned the proposition, and immediately requested an additional consultation. This resulted in a confirmation of the opinion previously expressed, and the feelings of that parent can be better appreciated than portrayed.

"Without delay, that good man determined to resign his living, gather up his little property, and proceed with his daughter to America. On her passage to this country, she became extremely ill, and there being a physician on board the vessel, his advice was requested. After seeing the patient (she was affected at the time with excessive vomiting from sea-sickness,) he told the father there was danger of premature delivery. Such, therefore, was the general appearance of this lady, that a medical man, merely taking appearances as his guide, at once concluded she was pregnant. This was about the substance of what I learned respecting the previous history of this interesting and extraordinary woman, and my opinion was then requested as to the character of her malady. My feelings were very naturally much enlisted in her behalf, and I proceeded with great caution in the investigation of her case. Without entering at this time into details as to the manner in which I conducted the examination, suffice it to say, that, after a faithful and critical survey, most minutely made in reference to every point, I stated in broad and unequivocal language, that she *was not pregnant.* The only reply this gentle creature made on hearing my opinion, was, 'Doctor, you are right.' These words were full of meaning, and their import I could not but appreciate. They were uttered neither with an air of triumph, nor with a feeling of unkindness towards those who had so cruelly abused her. The father was soon made acquainted with the result of my examination, but he indicated not the slightest emotion. His bearing was quiet and dignified. It was evident that he had never faltered for one moment in the belief of his daughter's virtue, and required no assurance from me or any other living being, that his child had been shamefully wronged. He asked me with great solicitude whether something could not be done to restore her to health, and I thought the old man's heart would break when I told him that his daughter was in the last stage of consumption. I left him with the pledge that he would inform me of her dissolution, and afford an opportunity, by a *post-mortem* examination, of testing the truth of my opinion.

"About four weeks from this time, I received a note announcing the death of his daughter, and requesting that I would immediately hasten to the house, for the purpose of making the examination. Dr. Ostrum, now practicing at Goshen, at my request accompanied me, and assisted in the autopsy. It may surprise you, gentlemen, but yet it is an interesting fact to communicate, for it exhibits the true character of the man, that during the *post-mortem* examination the father stood by, and witnessed every stage of the operation; his form was erect, his face pale and thoughtful, and one tear would have broken the agony of his grief. As he stood before me, he was not unlike the stricken oak in the forest, which, though blasted and stripped of its branches, was yet upright and majestic. As I removed the tumor from the womb, he seized it convulsively, and exclaimed: 'This is my trophy, and I will return with it to England, and it shall confound the traducers of my child.'

"Here, you perceive, both character and life were sacrificed by error of judgment on the part of those whose counsel had been invoked. Without a due appreciation of their responsibility—heedless, as it were, of the distressing consequences which would inevitably result from an erroneous judgment of a case, in which character was so deeply involved, the medical gentlemen, unjust to themselves, and to the Profession of which they should have been in part the conservators, rashly pronounced an opinion which consigned to an early grave a pure and lovely being, and crushed the heart of a devoted and confiding parent.

"It was the misfortune of this young lady to labor under an affection of the womb, which simulated, in several important particulars, the condition of pregnancy; and which the world, in its ignorance, might have supposed did in fact exist; yet there was no excuse for the physician, guided as he should have been by the lights of science, and governed by the principles of a sound morality. When I stated unequivocally to the lady that she *was not pregnant*, I gave an opinion which I knew would stand; my examination was conducted in a way which enabled me accurately to comprehend that the whole train of symptoms, indicating gestation, was occasioned by an enlargement of the womb, altogether unconnected with pregnancy, and produced by the presence of a large resisting tumor occupying the entire cavity of this organ. This opinion, I admit, was not arrived at without some degree of caution—caution fully justified by the peculiar nature of the issue involved in the decision.

"This, gentleman, is a case well calculated to make you pause, and contemplate with serious earnestness the position in which, by virtue of your diplomas, you will soon be placed. These diplomas will confer on you the right to practice your profession—they will intrust to your keeping the lives and happiness of your fellow-beings—you will frequently be the sole arbiters, on whose decision must rest the honor of your patients, and on whose judgment must stand all that is sacred in life." Pages 50–53.

In the midst of all the display which we have now seen of our author's philosophy of life and disease, it may be unexpected to find him now and then paying a respectful consideration to popular and superficial doctrines; and to their advocates it may be consoling to know, for example, that he speaks of "*neutralizing*" the syphilitic poison by mercury: page 339. But our author does not enlighten us as to the *modus operandi* of a *non-stimulating diet* in curing the same disease, as attested by many of the best writers; nor does he intimate that the *iodide of potassium*, which he greatly commends in these cases (page 340), also *neutralizes* the poison. That would not be in conformity with the sensible results that are peculiar to the union of acids and alkalies, and so the reader is left to make the best he may of the *modus operandi* of *iodine*. Do arsenic, cinchona, cobwebs, opium, emetics, phlebotomy, and mental emotions, some from the animal, some from the mineral, and some from the vegetable kingdom, and others from the spiritual domain, or from the contaminated mass itself, alike "neutralize the poison," when they overthrow intermittent fever, or unite chemically with the diseased solids, and thus convert both them and the blood to their normal state? Is there the slightest consistency in this with the exact laws of chemical affinities and the resulting coincidences? Our able and candid author will concede that there is not, and will expunge this trifling with facts as well as with philosophy from his next edition—albeit though it be stereotyped. We will pay the expense.

This suggestion, indeed, is important to render our author consistent with himself, not only in a general sense, but in the very matter now in question; for at other times he unavoidably allows the true philosophy of the operation of *mercury* to escape from his lips. Thus, in a case of suppression of the menses, he says that "*ptyalism* must be effected by mercury, and though it is not desirable that extensive *mercurial action* should take place, it is absolutely essential that the *system should be under its influence* for at least three or four months:" page 403.

Our author also imagines that measles and scarlet fever are owing to contamination of the blood by some peculiar virus, (not the insect pathology,) and that "nature as a general principle throws it upon the surface. But when, from some contravention, she is unable to dispose of it, the result of this inability is soon disclosed by the nervous disturbance which ensues, and which frequently terminates in convulsions:" page 437.

Now, however this doctrine may abound in recent authors, we deny that it is supported by the shadow of a fact, and believe that, like what we have already shown of analogous fictions, it is contradicted by all that is known in physiology and pathology. If this be not so, then it devolves upon the advocates of the hypothesis to show that it is not exclusively the offspring of imagination. And as to our author, does the doctrine, in the case before us, harmonize with what we have seen of his rational philosophy of convulsions in other instances, and in which the blood is not at all suspected? Does our author's treatment of scarlatina, under any circumstances, correspond with his pathology? Certainly not. It belongs purely to vital solidism, and, as our author well remarks upon this matter, "the treatment, after all, is the material part of the whole subject." See pages 542–550.

Under the same category must be included the speculations about *kiestine* (a word from the laboratory), which occur at page 474. It may be more encouraging that our author touches the shoals of the humoral pathology at the very outset of his work. But he seems conscious of this awkward position, and is evidently unwilling that his readers should accept the fallacy. Thus, of *chlorosis*, he says that it is often constituted by "*an impoverished condition of the blood*." Nevertheless, he regards this "impoverished condition" only as one of the ultimate effects of an extensive functional lesion, generally at first of the digestive organs, which leads frequently to disturbances of the uterine functions, or to lesions of structure in various parts. Let us quote the Professor on a subject so important to a right treatment of disease, and through which he dismisses the humoral pathology :—

> "Constipation," says he, "is so frequent an accompaniment of chlorosis, that we are inclined to think, with Marshall Hall, that it is one of the *most fruitful sources* of this disease. It is insidious in its results, and often lays the foundation of general derangement of the health. In these and in other cases the impoverishment of the blood may arise from the morbid influence exercised by these disturbances on the ganglionic system of nerves, the healthy and unaffected condition of which is so essential to the proper performance of the assimilative functions." Page 24.

Indeed, the whole of our author's reasoning and practical injunctions are entirely on the side of solidism; and it will be seen, from the following case of "amenorrhœa from an atonic condition of the system" (which illustrates still further our author's meaning as to an "impoverished condition of the blood"), that there is, after all, no encouragement in his work for the physical philosophers of life. Thus the Professor, upon "impoverished blood," as it was with Andral, the restorer of the doctrine :—

> "The *vital forces* are too low, the *vis naturalis* of the economy is deficient, and, as a necessary *consequence of this state of things*, there is functional inactivity of the uterus. Without a just discrimination much injury might befall the girl by injudicious medication." Page 484.

Finally, our author quotes Dr. Bennett as saying that *chlorosis* "arises exclusively from disease of the blood," and our author shall now become the critic :—

> "With this doctrine to guide us," he says, "our treatment of chlorosis would not only be useless, but *absolutely destructive* in cases in which this affection is traceable purely to organic disease of the womb, or to aberration in the functions of this organ." Page 25.

As our inquiry upon this topic is extensively applicable to the humoral pathology, and as we desire our author's co-operation, as well as what may be gleaned of a like nature from other quarters, we may be permitted to quote our author, in connection with Bernard, in the matter of the treatment of chlorosis, where we shall find them both upon the ground which we have always occupied. Thus our author :—

> "Bernard is of opinion that the curative effects of iron in chlorosis are not due to the absorption of this agent into the blood; he has not been able to detect, after injecting into the stomach iron filings, the lactate of iron, &c., more iron than usual in the vena portæ; but he observes that as iron exists in the food, it may perhaps require a certain combination in order that the metal may be absorbed. He however insists upon a very important fact, viz., that the salts of iron exercise a special action on the mucous coat of the stomach, each portion of this surface touched by the metal immediately assuming a more active circulation. It is, therefore, a direct excitant. May not chlorosis, he asks, according to this, be due to an impaired digestion, and may not the iron, by the excitation it produces, re-establish and fortify the digestive functions? Although this question is not completely solved, yet it must be admitted that it possesses much therapeutic interest." Page 28. *There is nothing new in this.*

Our author has given us so much that is sound in philosophy, and of great practical value in pathology and therapeutics, we should have, perhaps, no right to bring his occasional oversights into contrast, were it not for the benefit of rational medicine. Nor did we, in fairness, think it right to neglect the little which our author has conceded to popularity; and with this intention we refer such as are prone to speculation to a lecture upon *uremia* and *albuminuria*, which our author has especially provided for that class of readers, at pages 521–534. This, too, may have been judicious, in view of the odds that prevail against our author's substantial system of medicine. But where there is so much that is profound, erudite and philosophical, we have our doubts whether there is enough of the former to give satisfaction. Our author, moreover, should have been actuated by what he evidently sees, that the day is near at hand when medicine will be completely rescued from the toils of its invaders, and when their aspirations must go into the common wreck of factitious systems. Nor do we intend any discourtesy by this remark, which is prompted alone by our convictions of the momentous importance of the subject to the highest interests of mankind, to reason, and the claims of nature. What we have regarded as spurious cannot long survive the blaze of light which the nervous system is pouring upon physiology, pathology and therapeutics, if just conclusions should not be reached through other important sources that abound in the animal economy.

But most of all do we regret that our author should have given his countenance to a popular doctrine of the day, which reaches far beyond the ranks of the Profession—the spontaneity of living beings, as manifested in his comments upon intestinal worms: pages 61, 62. Admit this as an example of spontaneous origin, and it must be conceded by all that is sound in analogy, that the door is equally open for any other animal, and for man himself. The hypothesis is without a plausible fact, whilst the ova of these parasites, and of such as are found in the organization of the body, even in the fœtus, may require, in the natural external condition of the animals, a magnifying power of several hundred times to render them visible. They may, therefore, be absorbed into the circulation, where their new mode of existence, as well as in the intestinal canal, may so modify the condition of the animals that they shall lose all resemblance to their characteristics in the external world. The animal and vegetable tribes abound with equally remarkable aberrations, that arise from climate, domestication, and cultivation alone. But more than this. From whence comes the elaborate organization of these so-called parasites and their wonderful systems of design? How do they obtain, at their start into being, the seventeen or eighteen elements of which they are composed, and which are indispensable to the beginning of existence? And should not this objection have been urged against the pretended creation of the *Acarus Crossii* out of a simple solution of silex in water? Is there any thing in chemistry that will expound the union of such a number of elements into compounds of the most exact nature, or these compounds, by any thing known in physics, into systems of design, if you had all the elements to begin with? Or take oxygen, hydrogen, nitrogen and carbon alone; the chemist completely fails to fabricate the most simple organic compound out of these or any number of elements. Nor can the pretense be set up that the so-called intestinal parasites grow out of a previously organized part, for they are perfectly independent beings, and have no attachments to the intestine. The doctrine which ascribes *Muguet* "to the production of a parasitic plant within the epithelial cells" (p. 459), is open to precisely the same objections as apply to the spontaneity of animals, and is contradicted by all the physiological, pathological, and therapeutical facts. It is alone worthy of the most imaginative of the microscopical school, setting aside its pernicious tendencies in religion.

We cannot but think, after all, that whoever regards the animalcule, that can be discerned only through a high magnifying power, in all its wonderful complexity of organization, seemingly existing in *nothing*, in all its close analogies in composition and structure to man himself, and ponders upon the same analogies as they are only less complex in worms, and only still less in parasitic plants, and considers the stupendous designs which each part, and all together in unison, fulfill for the growth and well-being of each individual, and how there is no deviation in structure among all the individuals of the species, respectively, must concede the descent of the whole from progenitors that had been brought into being by an Intelligence higher than that which is enabled to explore the labyrinth and trace out the designs, and that thus informed, he must bow with reverential awe under the inspiration of such contemplations.

In parting with our author, we assure him, for ourself, that we hail the advent of such a work, abounding in practical matter of the deepest interest, and illustrated by principles and laws ordained by Nature, and we may further congratulate our author that this novelty in medical instruction has been achieved in America.

The great variety of topics embraced in our author's work is accompanied by a correspondingly copious index, while a general analysis of each lecture makes up a connected table of contents, and this is repeated at the head of the lectures as they follow each other, and each case is introduced by a brief analysis. Of all this variety of subjects it may be safely said, that each one is worthy of the place which it occupies in the book, and that none of them can fail to interest and instruct the student, or the practitioner who may be deficient in experience or in sound physiological, pathological, and therapeutical principles, or who would learn the value of simplicity combined with efficiency in medical treatment; and even the erudite and skillful will be well rewarded by a perusal of the work. Nor can we refrain from again expressing our surprise and gratification at finding these lectures so remarkably exempt from the superficial views that abound in the great thoroughfare of medicine. Nor is it the least valuable part of our author's labor, that it is embellished with religious and moral precepts, philanthropic suggestions, inculcations of delicacy, and examples of kindness to the suffering poor. Let us have, in conclusion, an illustration of all this in a brief apostrophe of exquisite pathos :—

" The case before you is well calculated to excite your sympathy. Here is a poor woman in feeble health, affected with a formidable disease, and yet compelled to seek her living by her own labor. Poverty, indeed, is no crime, but it is a trying inconvenience. [Here the patient exclaimed :—' Yes, doctor, dear, it is inconvenient with this load of sickness upon me ; but the Lord has afflicted me because I am a sinner, and I am content, and will bear my sufferings with all the strength I can.'] What an example is this poor woman to the discontented and dissatisfied of the earth! She is tranquil in mind, and submissive under her severe distress": p. 167. M. Paine.

Art. VI.—*Medico-Chirurgical Transactions.* Published by the Royal Medical and Chirurgical Society of London. Vol. xxxvii. London, 1854. 8vo. pp. 264.

The publications of the *Royal Medical and Chirurgical Society* now extend over a period of nearly half a century, and form a series of volumes which may be regarded as the largest storehouse of medical facts to which the English reader has access. The present volume fully sustains the high character of the series, though it is hardly equal to some of its immediate predecessors in the originality and importance of its papers. We cannot, we are persuaded, render the medical reader a more acceptable service, than by giving a brief analysis of the several papers which compose this volume.

Scrofulous Caries of the Left Astragalus—Excision—Cure—Formation of a Fresh Joint. By S. F. Statham, Assistant Surgeon, Univ. Coll. Hosp.—The patient was a child, æt. 5, of strumous tendency, in whom an abscess formed below the outer surface of the left ankle, which, on being opened, was found to expose the astragalus in a softened condition; the ankle-joint was healthy. Medical treatment having failed, the operation of excision was performed; the astragalus and the upper portion of the calcaneum were removed through a crucial excision made on the external surface of the foot. The extremities of the tibia and fibula were sound, and also the tarsal bones; the wound was filled with lint, and a splint applied to the inner side of the leg and foot. The patient's recovery was rapid and complete. Considerable motion of the joint is retained, and, with the aid of a nicely-adapted boot, "the lad is able to walk and run without any pain, and with merely a halt, partly due to the incumbrance of the instrument.

Pathological Remarks on the kind of Palpebral Tumor, usually called, in England, Tarsal Tumor. By H. Haynes Walton, Esq., F.R.C.S., Surgeon to the Central London Ophthalmic Hospital.—This paper is an inquiry into the pathological character of a tumor of the lid, which has been variously called "fibrinous tumor," "tarsal tumor not encysted," "albuminous tumor."

Notice of a Case of Skin Disease accompanied with Partial Hyper-

trophy of the Mammary Gland. By James Alderson, M. D., F. R. S. Physician to St. Mary's Hospital.

Case of Mollities Ossium, preceded by Degeneration of the Muscles. By Thomas K. Chambers, M. D., Physician to St. Mary's Hospital.—The chief points of interest in this case were the extreme general and muscular debility of the patient without any assignable cause, and the subsequent development of mollities ossium in its most aggravated form.

On the Keloid of Alibert, and on true Keloid. By Thomas Addison, M. D., Physician to Guy's Hospital.—The object of this paper is to draw a distinction between the affection generally recognized as the Keloid of Alibert, and another disease originating in the same tissue having an essentially different and more serious result.

On the Blood and Effused Fluids in Gout, Rheumatism, and Bright's Disease. By Alfred B. Garrod, M.D., Prof. of Mat. Med. at University College.—Dr. Garrod describes in this article a simple method of determining approximatively the amount of uric acid contained in the serum of the blood in certain diseases, which he styles the "Uric Acid Thread" experiment. It is as follows:—

Take from one to two fluid drachms of the serum of blood, and put it into a flattened dish or capsule; those which I prefer are about three inches in diameter, and about one third of an inch deep, which can be readily procured at any glass-house: to this is added the strong acetic acid of the London Pharmacopœia, in the proportion of about six minims to each fluid drachm of the serum; a few bubbles of gas are generally evolved at first; when the fluids are well mixed, a very fine thread is introduced, consisting of from one to three ultimate fibres from a piece of unwashed huckaback or other linen fabric, about one inch in length, which should be depressed by means of a small rod, as a probe or point of a pencil. The glass is then put aside in a moderately warm place, until the serum is quite set and almost dry; the mantel-piece in a room of the ordinary temperature answers very well, the time varying from eighteen to forty-eight hours, depending on the warmth and dryness of the atmosphere. Should uric acid be present in the serum in quantities above a certain small amount noticed below, it will crystallize, and during its crystallization will be attracted to the thread, and assume a form not unlike that presented by stone sugar upon a string. To observe this appearance, a linear magnifying power of about fifty or sixty, procured with an inch object-glass and low eyepiece, or a single lens of one sixth of an inch focus, answers perfectly. The uric acid is found in the form of rhombs, the size of the crystals varying with the rapidity with which the drying of the serum has been effected.

On Excision of the Knee-Joint. By G. M. Jones, Esq., Surgeon to the Jersey Hospital.—Mr. Jones furnishes us in this paper a table of all the cases of excision of knee-joint which he has been able to collect. The whole number is thirty-three; of this number twenty recovered, nine died, three under treatment, one doubtful.

Since the publication of Mr. Jones' paper, Mr. Butcher, of Dublin, has published the details of his case (*Dublin Quart. Jour.*, Feb., 1855), with the addition of a table containing all the cases operated upon since July, 1850.

On the Radical Cure of Reducible Inguinal Hernia, by a new Operation with Cases and Remarks. By T. SPENCER WELLS, F. R. C. S.—The design of Mr. Wells' paper is to lay before the English medical public a new method of curing reducible inguinal hernia. This new method is that of Professor Wützer, of Bonn, and was presented to our readers in the January (1854) number of this Journal.

Operations of Morbid Changes in the Mucous Membrane of the Stomach. By DR. HANFIELD JONES.—In an examination of the stomachs of a hundred deceased persons taken as they presented themselves, Dr. Jones arrives at some important conclusions in regard to the diseases of this organ. The following are the deviations from the typically healthy condition which he observed :—

1. *Nuclear masses.* These are the solitary glands, and Dr. Jones is doubtful in regard to the degree of their development within the physical limit. 2. *Diffused nuclear formation*, extending in extreme instances uniformly throughout the mucous membrane, and causing atrophy of the tubes. 3. *Intertubular fibroid formation;* this condition is commonly associated with the preceding, and consists in this, that the exudation in which the nuclei lie, passes into the form of a more or less fibroid, or homogeneo-fibroid stroma. 4. *Spontaneous decay of the tubes*, giving the mucous membrane the appearance of a mass of granular and celloid dèbris, interspersed with fat vesicles and fatty matter. 5. *Deposit of black and yellow pigment;* occasionally within the tubes, more often between them. 6. *Cystic formation;* either by liquefaction of a nuclear mass, by distention of a tube, or by the formation of a cyst *de novo.* 7. *Mammillation;* this is of two kinds. One may be called healthy and seems to depend upon a contraction of the corium of the mucous membrane, due to its organic muscular fibre; the other depends upon a fissuring of the mucous membrane or local atrophy. 8. *Gathering up of the lower parts of the tubes* in the pyloric region, so as to form a group of convolutions something like the acini of a conglomerate gland is often observed.

No satisfactory explanation of this change can be given. 9. *The epithelium of the tubes* may become fatty, atrophied, &c., these changes not being well made out. 10. *Self-digestion* in slighter degrees is very common, and invariably most marked in the splenic region.

Dr. Jones gives a careful analysis of his tables, and exhibits an interesting view of the comparative frequency of these pathological appearances in different portions of the stomach, at different ages, and in the sexes. The following suggestive remarks conclude this highly instructive paper :—

> In concluding this paper, which I feel is but a first labor in a hitherto little-cultivated field, I cannot but remark how strongly the degenerative tendency characterizes the disease of the present day. We know not whether it was so in former times, but for ourselves the lesson is plain and clear, that the integrity of the vital force, which we call health, must be carefully cherished if it is to be long preserved. From diminished vital power there is no great step to organic decay ; and if the one exists any length of time, there is too much reason to fear that the other is in progress. If the researches I have made do nothing more than show that degenerative change in one important organ is no unfrequent event, and it requires but a moderate pathological experience to show that the same is true with respect to many other parts, how does it then behoove us to look out for and anticipate, as far as possible, these insidious disorganizing processes, against which our therapeutic endeavors are often so unavailing !

A Case of fatal Asphyxia, caused by the Detachment of a Diseased Bronchial Gland which was impacted in the Larynx. By George Edwards, of Wolverhampton.—The particulars of this case appeared in the Retrospect of the January number of this journal, to which the reader is referred.

Remarks on a peculiar Form of Tumor of the Skin, denominated "Pachydermatocele" illustrated by Cases. By Valentine Mott, M.D. C.L.D., Emeritus Prof. of Surgery in the University of New York.—We are gratified to see our distinguished countryman, Prof. Mott, honoring his election to a membership of the *Royal Medical and Chirurgical Society* by the contribution to its transactions of so valuable a surgical paper. We need scarcely add, that we should have been still more pleased to have found this contribution to medical science in one of our home periodicals, or the transactions of the *American Medical Association.* But we can well afford to spare this literary effort from our original periodical literature, for Prof. Mott, with his multiplicity of engagements, has been no sinecure, as the journalism of our city and country attests. We trust this paper is the pledge that neither a firmly-settled reputation, active professional pursuits, nor declining age, are to deprive our profession of occasional contributions from his experienced pen.

The disease to which Prof. Mott gives the name of *pachydermatocele* is congenital, having its origin in a brown spot or mole, and increasing with the years of the individual until they present hideous deformities.

The morbid structures have all been more brown than the surrounding integuments, with a flabby feel, very like a relaxed and very emaciated mamma. In several of the cases there were two or three layers or stories, as in the one upon the neck and shoulder, resembling the fanciful and successive turns of a tippet, or three separate folds of a rich maroon velvet curtain. They do not appear to possess any great degree of vascularity, neither having veins visible upon the external surface, nor diminishing in size much after being detached from the body, therein differing essentially from the nævus maternus, or aneurism by anastomosis. * * * * * On cutting a slice transversely, or making an incision into these growths, the sub-dermoid structure to the eye seems to be hypertrophied areolar tissue, with very little evidence of blood vessels running through it. From their general appearance and duration, there is no evidence whatever of anything malignant in their structure or tendency. In one of the cases there was a return of the same kind of tumor upon the same spot, namely, the head, though to a less extent, demanding a second excision, and it returned again, and is now of the same shape and character as at first. In another patient, a boy, the same disposition to return was observed during the granulating process, but it was completely conquered by the patient and skillful application of compressed sponge and the roller bandage. In the other three cases, there was no disposition whatever to a reproduction of the disease. The sense of feeling was somewhat diminished below the natural standard in all of the cases. In only one was there any ulcerative action, and this arose entirely from want of attention to personal cleanliness. The largest required to be carefully washed every day with soap and water, then well dried and powdered with some farinaceous substance. If this was neglected for one day, an acrid fetid discharge took place, soon leading to excoriation.

Five cases of this disease are reported in the paper, and the different operations necessary to their removal fully described. We shall have space to introduce but one case, which will afford a fair illustration of the nature of the tumor, and the operation undertaken for its removal.

Case V.—This was truly a monstrous morbid production. Though disgusting and even frightful, to ordinary beholders, there was, in its organization and external characters, looking at it as a morbid growth, something symmetrical and beautiful. From the mother's statement, it was observed soon after birth. Miss L——, æt. about 45 years, of robust country health, came to me from the western part of the State of New York, as she said, to show me a tumor, and to know if it could be removed.' From the compact and regular arrangement of her dress, the impression on my mind at once was, that it was no great importance as to size. My astonishment was not a little excited, as she removed her dress from the chest and neck, not only from the immense size of the mass, but that it could all be so completely stowed away, as not to disturb the apparent symmetry and harmony of her proportions. The tumor was of a dark brown or copper color, of a soft, elastic feel, very much resembling a collapsed lung or a placenta. It hung in beautiful and fantastic folds, like the convolutions of a tippet over the neck, shoulder and chest. There were five of these folds or stories, the smallest above, the longest or broadest below. It was attached to the healthy integuments behind and in front of the ear—directly under its lobe—to the entire extent of the side of the neck from near the nucha to the edge of the larynx and trachea, to the whole line of the clavicle and middle of the upper bone of the sternum, over the shoulder, part of the scapula, and reaching upon the arm to near the insertion of the deltoid muscle—over the entire pectoralis major to the middle of the sternum and ensiform cartilage, and to the upper part of the rectus abdominis and latissimus dorsi, with a portion of the serratus magnus anticus. The lowest loose fold hung a little below a line with the umbilicus. The entire length of the tumor was twenty-one inches, its breadth eighteen inches. Stating to her that I thought it might be removed, she requested to have the operation performed if there was, as she said, "any chance of her life." Being made insensible with chloroform, the operation was performed in the following manner:

An incision was made a little below the tumor, across the lower part of the deltoid muscle, and the growth was dissected from this muscle to the top of the shoulder, then from the side of the thorax and upper part of the abdomen, then from the whole line of the clavicle, the upper part of of the sternum, the back of the neck, and from the trapezius muscle, it was now detached from about the ear, and the dissection continued towards the front part of the neck, in the direction of the course of the sterno-cleido mastoid muscle, until it terminated by an incision over the mesial line of the larynx and trachea in their entire length. In all this extensive dissection many arteries required ligatures, and some of them were of considerable size. The most remarkable, and indeed monstrous, were two veins entering the subclavian, no doubt the external jugular in its anterior and posterior branches, each apparently separate. Their size was the greatest I ever saw in any superficial veins, being each not less than my fore finger. They were running close together, and were seized successively the instant on being cut with the forceps, and were tied to prevent the admission of air, from which, on one occasion, I had seen frightful and almost fatal effects. As the tumor originated on the upper part of the neck, these two enormous superficial veins were probably the principal channels for returning the blood from the whole abnormal mass. They lay side by side, as they went through the deep cervical fascia, but probably just on entering the subclavian, they united, as is usual in the normal state. As the operation was considerably protracted, from the extensive superficial dissection, and the large number of arteries which required ligatures, some exhaustion followed, but she was not alarmingly depressed at any moment, and quickly rallied when the anæsthesia was allowed to pass off.

With the exception of two attacks of erysipelas, one of which imminently threatened the life of the patient, the case progressed favorably, and resulted in complete and permanent recovery. The specimen was submitted to microscopical examination by Prof. Swett (not Lovett as the English print has it,) who thus reported: "The specimen appears to me to consist of an hypertrophy of the skin, and of the sub-cutaneous cellular tissue. Under the microscope I find nothing but an exaggeration of the natural tissues. There are no evidences of a malignant formation."

The paper is accompanied with two well-executed lithographic plates representing these tumors.

Case of Distortion of the Spine, with Observations on Rotation of the Vertebræ as a Complication of Lateral Curvature. By Thomas Hodgkin, M.D., L.R.C.P., and Wm. Adams, F.R.C.S.—These authors report the dissection of a remarkable case of spinal deformity in which there was a transverse rotation of the lumbar vertebræ to the left, the change depending upon absorption of the intervertebral cartilages. The patient, the distinguished geologist, Gideon Mantell, had been examined by Liston, Brodie, Bright, Lawrence, Coulson, &c., but no one suspected the true nature of the disease, the obscurity of the case depending upon the want of deviation of the spinous processes, though there actually existed severe lateral curvature and the appearance of a tumor. The general opinion was that destructive disease existed either in the bodies of the vertebræ or intervertebral substances, and was accompanied by lumbar abscess. The tumors observed were the transverse processes, which were rendered prominent by this gradual rotation of the bodies of the vertebræ, while the transverse processes upon the right side gradually disappeared. This peculiar change seems to have been recognized and described by Dr. Dods, in his work *Path. Obs. on the Rotated or Contorted Spine, &c.*, published in 1824. He believed that it was produced in every instance "by a peculiar affection of the muscles of the back, which affection of the muscles does not, in my opinion, primarily and necessarily, unnaturally crook or curve the spine in any direction, but *rotates or twists* it in the line of its axis; and that this rotation, or twisting of the spine, is, in itself, sufficient to explain, in the most satisfactory manner, all the phenomena of this important deformity." He was accustomed to treat his cases by frictions with oil to the spine, and, during his manipulations, he discovered these bony projections, always upon the *left side*, and having noticed whether there was any apparent lateral curvature or not, he ascribed them to their proper cause, viz: the transverse processes of the vertebræ of the loins.

On Gout and Rheumatism; the Differential Diagnosis, and the Nature of the so-called Rheumatic Gout. By Alfred Baring Garrod, M.D.—In this communication Dr. Garrod gives the analysis of the blood in one hundred and seventy-seven cases, tabulated thus:—1. Articular affections, in which was demonstrated the *presence* of an abnormal amount of uric acid in the blood. 2. Articular affections, in which the *absence* of uric acid in the blood was shown. 3. Articular affections, proved to be closely connected with *urethral* affection. 4. Affection *non-articular* in character. The examination was generally by the "uric acid thread," already described in the notice of Dr. Garrod's former paper. The result of these experiments are of the highest interest in practice, as proving that gout and rheumatism are quite distinct diseases. We shall merely quote this part of the paper, and dismiss it:—

> In conclusion, as we have found that the blood in every patient suffering from genuine gout, contained an abnormal amount of uric acid, and that in acute rheumatism such was not the condition of this fluid; and again, that in all cases which could be traced up to gout (although the symptoms exhibited at the time might not be very characteristic) uric acid was present, whereas it was absent in those cases where no such phenomena could be found, I think we shall in future be fully justified in considering this condition of the blood as not only a most important, but even a *pathognomonic* sign, and one more to be depended on than any of the other symptoms taken separately; and that in an otherwise doubtful case, where the diagnosis rests between gout and rheumatism, the presence or absence of this acid in the circulating fluid (determined either from the examination of the serum of the blood or blister exudation) may be looked upon as decisive of the question. * * * * It will be seen that the specific gravity and reaction of the blood has been noticed in the majority of cases; with regard to the latter property I may state that I have *always* found it *alkaline*, both in gout and rheumatism, and I am perfectly confident that the opinion which has been held by some to the effect that in acute rheumatism it becomes acid, is completely erroneous.

Case of Traumatic Aneurism of the Ophthalmic Artery, consequent on Injury of the Head, cured by Ligature of the Common Carotid Artery. By T. B. Curling, F.R.S., Surgeon of the London Hospital.—The facts of this interesting case are briefly these: A laborer, æt. 49, rheumatic and feeble, was admitted to the hospital with fracture of the clavicle, hemorrhage from the right ear, and symptoms of concussion, following a fall upon the right shoulder, and right side of the head. With active antiphlogistic treatment he gradually rallied, but at the end of a week total deafness in the right ear came on, serous discharge continued, and the face was drawn to the right side, though the tongue could be protruded straight forward. Blisters, calomel, etc., relieved the paralysis, when the right eye became slightly inflamed with chemosis; the eye-ball now began to be prominent, with pain in the head, etc. This protrusion increased until pulsation was detected, and a bruit heard on placing the ear against the right temple; the pain was of a throbbing kind; vision finally began to be impaired. A ligature was now applied to the carotid in the upper third of its course, which at once relieved the throbbing pain in the head, and pulsation of the eye-ball; its prominence subsided, but vision was greatly impaired. Mr. Curling refers to two other similar cases, in one of which vision was permanently lost, and in the other saved but with a fixed pupil. We may add to these three cases a fourth which occurred at the New York City Hospital last year under Dr. Van Buren.

English Statistics of Hooping-Cough. By Edward Smith, M.D., L.L.B.—The facts of this communication are drawn from the Registrar-General's Reports, and the conclusions, which we must give without comment, are:—

The deductions in reference to hooping-cough do not correspond to the general mortality. They are directly opposed to the zymotic class, and have little relation to the nervous class, but exhibit a remarkable correspondence with the pectoral class (excluding phthisis). This latter fact indicates a close analogy between fatal cases of hooping-cough and chest affections.

It is a disease essentially of the period of dentition of the first series, and under æt. 1 year is the most fatal of all diseases. * * * *

The mortality is more prevalent in females at every period of life, and this prevalence increases as life advances; but it does not thence follow that the disease itself is more prevalent in that sex. * * * *

The degree of temperature, and the number of deaths, are in the inverse ratio to each other. The greatest mortality is observed in the first quarter, and also in the winter half-year, and the least mortality in the third quarter and summer half-year. The maximum month is about April, and the minimum about August, and the mortality passes from the latter to the former and back again in uniform waves. The highest temperature precedes the lowest mortality by about a month, and an excess of it does not produce excessive mortality from hooping-cough. The line of temperature separating high from low mortality is 48°. The waves of the greatest intensity of mortality occur every second year, being then 76 and 74 cases per week, in contrast to 47 and 52 cases per week, observed as the highest mortality in the alternate years, or those of recession. After a severe outbreak of the disease, there is diminished intensity, and lessened temperature does not then produce its ordinary ill effects. As the year of recession leads into that of intensity, the intensity becomes so great as to move *in advance*, and not in the rear, of the lines of temperature, contrary to the established rule.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

On Circular Cauterization of the Base of Hemorrhoidal Tumors complicated with Prolapse of the Mucous Membrane of the Rectum.

By Dr. Alphonse Amussat, Jun.

Messrs. Editors :—

Some months since I received from Dr. Alphonse Amussat his interesting monograph *on Hemorrhoids*, and a complete set of the stereotyped plates, accompanied with the request that I would translate the paper into English. Since then, numerous engagements have interposed to prevent the completion of this object, and in the mean time an excellent translation of the paper has appeared in the *Dublin Quarterly Journal.* In this translation one valuable note has been omitted entirely, and the cases reported by the author have been abridged, but the substance of each is still retained. In other respects the translation is neat and faithful.

As this monograph is a valuable contribution to our knowledge of this class of surgical affections, I take the liberty of sending you the plates, with the suggestion that you republish the translation of the *Dublin Quarterly* in the *New York Journal of Medicine.* For myself, I have only added the note referred to as omitted.

Respectfully,

Frank H. Hamilton.

Buffalo, *May* 20, 1855.

The number of works which, both in ancient and modern times, have been published on the subject of hemorrhoids, the place which this affection occupies in pathological treatises, and the various remedies proposed against it, testify at once to its frequency and its importance. The question, so long debated, of the expediency of surgical interference in affections of this nature, has not yet been decided in the minds of all practitioners, and I have no intention of entering here on a discussion which would lead me beyond the limits I have laid down for myself. A survey of our periodical literature will at once show the efforts which the most distinguished physicians and surgeons of all countries have made, especially since the commencement of the nineteenth century, to facilitate and render more certain the cure of this disease, whether, in its simple form, it constitutes principally an annoyance and an inconvenience, or, complicated with ulceration, severe hemorrhage, or prolapse of the neighboring rectal mucous membrane, it threatens life, or slowly exhausts the patient's strength. The therapeutics of this affection are consequently more than ordinarily rich in medicines, and varied operative proceedings.

For my part, whenever hemorrhoids are of long standing, voluminous, ulcerated, accompanied by prolapse of the mucous membrane of the rectum, or with copious hemorrhages; when they affect the general health; and when the more ordinary therapeutic means have failed, and no special contra-indication exists, I remove one or more, according to their number and volume.

During twenty-five years that my father has pursued this plan, the destruction of the hemorrhoids, combined with the precautions he has recommended to the observance of his patients, has never given him other than satisfactory results, both as respects the local condition of the parts, and the state of the general health.

Prolapse of the mucous membrane of the rectum, being one of the most frequent complications of confirmed and long-standing internal hemorrhoids, has appeared to me worthy of fixing our attention, both as to its etiology and its treatment. Admitted by most authors, this prolapse is easily explained when we carefully study the course of the principal affection. In the beginning, hemorrhoids appear as the effects of hereditary predisposition, of constipation, a sedentary life, the abuse of stimulants, or of a too nutritious diet, and are at first formed only by a determination of blood to the vessels of the inferior extremity of the rectum; little tumors, invisible externally, are soon developed, and become the seat of itching and of tension, which increase under the influence of the producing causes, often disappear to return again, and are, in a great number of cases, accompanied by more or less abundant hemorrhages.

The affection in this simple state belongs to internal pathology, and a return to suitable hygienic rules, or the adoption of a very simple antiphlogistic treatment is, most frequently, sufficient to overcome it. But when, continuing to be developed, the hemorrhoidal tumors have acquired a certain volume, they begin to appear at the anal orifice, which they more or less obstruct; and however little the patient may be constipated, as is most usually the case, the hardened fæcal matters push down the tumors before them during the action of the bowels. The consequence is, that the mucous membrane of the rectum, necessarily following their movements, becomes as much lengthened as possible; but soon this extension ceases to be sufficient; united to the muscular membrane by a loose cellular tissue, it is gradually separated from it, and subsequently returns with progressively increasing difficulty, being retained externally by the hemorrhoidal masses, and the sphincter compressing them. If the patient, induced by deceptive inclinations to go to stool, by pain, or any other cause, acquires a habit of making prolonged efforts at defecation, the hemorrhoids increase, and the prolapse of the mucous membrane augments to that point, that it soon becomes impossible to return it after each motion without the employment of a regular taxis. By degrees, the sphincter becoming relaxed, the hemorrhoids come down on the least movement; at last a period arrives when they remain constantly out, unless they are retained by a bandage specially adapted to the purpose, the presence of which—always inconvenient—finally becomes insupportable. These facts I have verified in a sufficiently great number of patients, and I shall hereafter quote cases which will establish them.

In some very rare instances a protrusion of the rectum and internal hemorrhoids coexist; we have, then, two distinct affections to treat. During ten years that I have attended my father's practice I have only once had an opportunity of observing this coincidence,* while I have often seen long-standing voluminous hemorrhoidal tumors accompanied by a more or less extensive prolapse of the rectal mucous membrane.

Since the month of April, 1844,† the date of the first employment of the cauterization of the base of hemorrhoidal tumors with grooved forceps charged with Filhos' caustic, the idea of which originated with me, we had perceived that this new mode of operation enabled us to obtain the cure of hemorrhoids, and that the hemorrhages, ulcerations, &c., disappeared together with the tumors; but it remained to be shown whether, in cases in which these affections should be complicated with tolerably extensive prolapse of the rectal mucous membrane, cauterization by the same plan would remedy the principal affection and its complication. Experience has not been tardy in justifying the hope we had entertained in this respect. It is, moreover, easy to account for this result, which we verified in all our operations of this kind, in reading the description of our proceeding. The cases of the patients in whom this complication was sufficiently advanced, and the drawings taken from nature, which I have appended to them, will, I trust, enable practitioners to understand it.

When we are about to examine a patient, whom we suppose to be affected with internal hemorrhoids, we cause him to place himself on a vessel, and to make efforts at defecation; the tumors then come down, and we easily demonstrate their presence; often they even permanently appear externally, or show themselves on the exercise of the least effort. But as it is necessary to judge precisely of the extent of the prolapse of the mucous membrane of the rectum, we advise the patient to take a lavement, and to pass it again in our presence some moments after, using efforts, and continuing the latter when he gets up. With the assistance of this mode of investigation, we arrive at an exact appreciation of the extent of the affection, and the operator is enabled to judge beforehand at what height he ought to place the *porte caustique* forceps, in order to cure at once the hemorrhoidal affection, and the rectal prolapse which complicates it.

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* Mémoire sur la destruction des Hémorrhoïdes Internes, par la Cauterisation circulaire de leur Pédicule. Par J. Z. Amussat. 1836. Page 23.

† Ibid., p. 22.

The introduction of the index finger into the rectum is a means of diagnosis on which we must not place too much reliance, for I have known several patients who, examined in this manner by the most distinguished practioners, had been declared not to have hemorrhoids, and in whom I, nevertheless, found even voluminous ones. The surgeon accustomed to this mode of examination, indeed, experiences internally a peculiar sensation of softness in certain points, proves the existence of inequalities rather than of tumors disappearing under the finger, and gives pain to the patient when the tumors are ulcerated; but in general these signs are not sufficient to enable him to affirm whether a hemorrhoidal affection exists or not. The rectal *toucher* is especially useful in ascertaining whether any particular complication, such as a stricture, polypus, or cancer, coexists.

At the same time we examine the number of tumors which ought to be cauterized, as, for the following reasons, we never destroy them all:—In order not to suppress suddenly and completely a state to which the system has long been accustomed, and not to expose the patient to a disturbance which might not be free from inconvenience; besides, experience has shown, that when we have destroyed the more voluminous tumor when there are two, or the most voluminous ones when there are more, those which remain diminish and give much less inconvenience. The cauterization of the largest hemorrhoid, when well performed, often prevents the others coming out, and the ulcerations, if such exist, being no longer subjected to a continual friction against one another, cicatrize, and the patients enjoy as good health as if they had been completely freed from them. Consequently, a different mode of proceeding would be at least useless, and might sometimes be dangerous. If, contrary to what usually occurs, the patient should subsequently suffer, recourse might be had to the operation, which would not then be more severe than before, and would remedy an inconvenience which we sometimes meet with, but which much more frequently does not present itself.

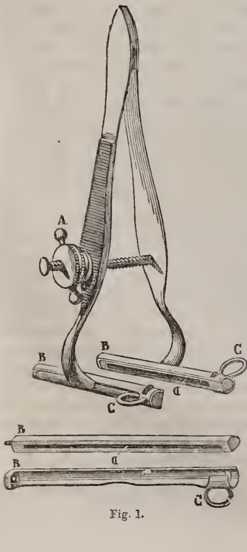

Fig. 1.

In ordinary cases I employ my forceps in the form of a compass with protecting blades,—more convenient when it is necessary to carry the cauterization to an elevated point of the rectum,—but in the case of which I am now speaking I prefer the T-forceps of my father, or those which I have had made on the same plan, with very slight modifications. In fact, when there are voluminous hemorrhoids, with more or less extensive prolapse of the mucous membrane, the tumors expanding largely externally, it is very easy to cauterize their base.

Since the month of June, 1844, the period of the construction of my first grooved forceps for the cauterization of internal hemorrhoids, we have subjected both the instruments and the operative manipulation to numerous modifications, which have made the operation so simple that a perusal of the description of it will render its application easy; and already distinguished surgeons, among whom I would mention MM. Maher, J. Roux, and Laurencin, Professors in the schools of the Imperial Marine, MM. H. Larrey, Barthélemy, Martin Saint-Ange, Thirion (of Namur), Mascarel, &c., have employed this proceeding with success, using instruments made on the model of ours, or having the greatest analogy to them.

The T-shaped porte-caustique forceps of my father, a drawing of which is given on p. 114,* was made on the model of a little forceps he used for rupturing the internal membranes of arteries, in order to facilitate torsion. This instrument is composed of two legs, united at one of their extremities by a spring; at the other they are furnished with two grooved semicircles of steel, D, perpendicular in their direction, and so arranged as to oppose one another when the forceps is closed, or when it embraces the base of the tumor which it is wished to cauterize. Two small sliding plates, B, having a movement of rotation around the grooves, which are cylindrical, have at one of their extremities a small handle, C, intended to be used for moving them, and consequently to cover or uncover the caustic when it is thought advisable to do so. A screw, A, is used for tightening the legs of the instrument. The two sliding plates, to which I have given the name of protectors, have partly replaced the preserving forceps which we originally used for completely isolating the tumors from the surrounding parts previously to cauterizing them. When the protectors are placed in front of the grooves, the caustic being entirely covered, we may seize the tumors, let them go again, take hold of them, or slide the grooved semicircles to a greater or less height, without the patient experiencing the slightest painful sensation.

To fill the grooves of the instrument, I employ Filhos' caustic in paste, or solid. The caustic paste is made by throwing a sufficient quantity of pulverized Filhos' caustic into a saucer, adding some drops of alcohol or eau de Cologne, and triturating the mixture with a spatula. When the paste has the consistence of ordinary honey it is placed in the grooves, and covered with the protectors. To fill them with solid caustic, the latter is poured into them while in state of fusion.

I have had forceps made on this model with but a very slight difference, as may be seen by Fig. 2, on next page. This instrument, to which I have given the name of *pince porte-caustique à étau* (these instruments have been made in the manufactories of M. Charrière), constructed at once on the model of my father's forceps, and of a little hand-vice, differs from his instrument in this,—that the grooves, B, which are movable on their axis, being placed in other grooves, A, attached to the legs of the forceps, may be withdrawn, and have the fused Filhos' caustic easily poured into them; besides, the resistance of its legs admits of the tumor being compressed as with a vice, and of the production of mortification by pressure. This forceps acts then at the same time by cauterization and pressure combined, and allows us to operate more rapidly, since each of these actions is separately sufficient, though it requires more time, to accomplish the mortification of the tumor. When about to use these forceps, the grooved pieces, B, are withdrawn, and fused Filhos' caustic is poured in so as to be level with the edges without overflowing them; should it overflow, it must be rubbed off with a cloth, or a piece of pumice stone, until it is exactly level; the two little grooves are then inclosed in a ground glass stoppered bottle filled with powdered lime, in order to preserve the caustic from the contact of the air, and from moisture. At the time of operating they are well wiped and replaced in the forceps, and turned round, so as to cover the caustic until the moment when it is to act upon the tissues. To effect the cauterization in this particular case I prefer the T-forceps, because, their grooved portions being parallel, they exercise upon the tissues a pressure in every sense equal; but this operation may be performed with the different forceps which have been constructed for cauterizing hemorrhoids; we may, even

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* This forceps is drawn one third less than its actual magnitude; the groove and blade, separately represented, are of the full size.

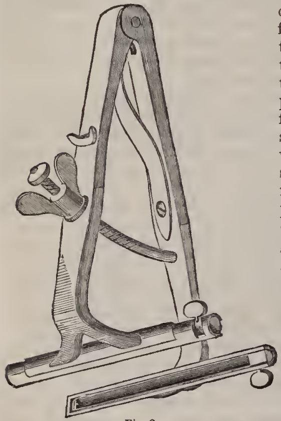

Fig. 2.

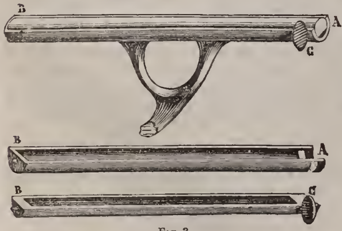

Fig. 3.

more easily than in other cases, cauterize the tumors with a cone of Filhos' caustic*, as I shall hereafter describe.

Internal hemorrhoids are often complicated with corresponding external hemorrhoids, or rather with swellings forming two rows of superposed tumors. Experience has proved that it is not necessary to destroy the external swellings—they die away when the internal hemorrhoids have been destroyed by caustic.

The operation having been decided on, I generally prepare the patient for several days previously with depuratives, baths, and mild regimen, even venesection, if it should appear necessary; and the evening before the operation I prescribe a purgative of cold-drawn castor oil, in order to unload the bowels, and to prevent the occurrence of alvine evacuations for two or three days at the least.

The articles necessary for the operation are: one or two porte-caustique forceps; pulverized Filhos' caustic; alcohol or eau de Cologne; a sheet folded square; a piece of oil-cloth; a syphon for continuous irrigation; a syringe, or a clyso-pump; two large vessels, one to contain cold water, intended for the irrigation to be carried on during the operation; the other to receive the fluid when it shall have passed over the anus.

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* The composition of Filho's caustic is as follows:

Caustic potash, prepared with lime	2 parts.
Quicklime	1 part.

Melt this mixture in a crucible, and run it, either in an ingot mould, or in tubes of zinc, lead, or of very thin silver, as is practiced by M. Robiquet. Cut every part of the metallic cover, so as to expose a portion of the caustic, when needed for cauterization. direct and in masse, of hemorrhoidal tumors, or of any other excrescence, or of the neck of the uterus. This same caustic, when it is in fusion, can be run into thin plates by pouring it rapidly on a marble table, and in this state I often use it for linear cauterization.

When caustic in powder is needed we crush these blades, or bits of fused caustic of any other shape, in a marble mortar, and preserve it in a flagon, hermetically closed with an emery-fitted stopper. At the moment when we are about to operate, we mix in a saucer a portion of this powder with a little alcohol, so as to make a pretty stiff paste, which we place in the basins of the forceps.

The proportions of this caustic are different from those of the Vienna paste, which is composed of

Caustic potash, prepared with lime	5 parts.
Quicklime	6 parts.

As will be observed, in the caustic of Filhos the potash is in excess by one third, while in the caustic of Vienna it is the lime which is in excess by one sixth.

M. Filhos has observed that the excess of lime in the Vienna caustic renders the igneous fusion of the mixture more difficult, gives to the new compound a little too much consistence to be run with facility into the metallic tubes, and has, as a practical result, the serious inconvenience of diminishing the promptitude of its caustic action; a less quantity of quicklime would impart to the solidified mixture a portion of its deliquescence. Three minutes suffice with this caustic for making the eschar necessary to establish a cautery. For cauterization of the neck of the uterus, it possesses all the advantages of iron at a red heat, without its inconveniences; for we may have the sticks of caustic so slender that they may be easily introduced into the interior of any ulcerated neck which it may be thought necessary to cauterize.

Before the operation the bed on which it is to be performed should be arranged. The folded sheet is placed across it, and is covered with an oil-cloth reaching to the vessel placed under the edge of the bed, to receive the water projected during the operation; and in order that the latter may flow off easily, the two inferior angles of the oil-cloth should be pinned together, so as to form a channel to carry the water directly into the vessel intended to receive it.

The patient, having taken a lavement during these preparations, passes it again, at the moment of operation, into a vessel left near the bed, and then lies down, still keeping up the efforts at expulsion, which are indispensably necessary to allow the surgeon to place the forceps properly.

The position of the patient which I prefer is the same as that for the operation for fistula in ano. Doubtless, if the patient were on his knees, or placed as for the operation of lithotomy, he would be better circumstanced for keeping up the efforts; but notwithstanding the advantage the operator might have by employing one or other of these positions, I have renounced them on account of the fatigue the patients experience—a degree of fatigue which once seemed to me to have occasioned syncope.

I am not in the habit of submitting my patients to the action of anæsthetic agents unless they earnestly request it; knowing by experience that the operation is not sufficiently painful to render their employment necessary, for under the influence of the very strong compression used, and of the douches of cold water, the pain is easily borne. During the operation the patient feels a pinching, which, in a great measure, masks the pain of cauterization, and consequently only complains of the latter at the moment of the withdrawal of the instrument. This smarting, besides, is diminished rapidly enough by the means I employ immediately after the operation. Two assistants placed at the sides are engaged in holding back the neighboring parts; a third is occupied in directing a continued stream of cold water on the anal region. Strictly speaking, one assistant, and that even a non-medical person, might be sufficient, as he would only have to work the piston of the instrument, for the operator could direct the current of liquid with the left hand, while he held the forceps in the right, but it is much more convenient to be assisted by several persons.

The patient having been placed on the bed in the manner described, and continuing the efforts at defecation made in passing the lavement, the assistants carefully keep back the surrounding parts. The operator, holding in his right hand the porte-caustique forceps with its troughs covered, so as to be able to touch the tissues without causing the least painful sensation, seizes the tumor gently, without compressing it, and desires the patient to make efforts, if possible, still more energetic, in order to allow him to pass the instrument to the height he judges advisable. This period of the operation, very important in all cases, is especially so in this. When the forceps is well placed, he tightens the screw sufficiently to prevent the tumor escaping, but so as to be able with ease to turn the grooved pieces or the protectors. When the caustic is in contact with the tissues, the instrument is tightened as much as possible, but gradually, in order to bring the compression to its maximum. By acting thus, the duration of the operation is shortened, and the pain is diminished, the patient most frequently complaining only of the pressure. The douche of cold water is immediately commenced, and continued while the operation lasts, which varies from two to four minutes. With strong forceps and fused caustic two minutes are longer than is necessary for cauterization.

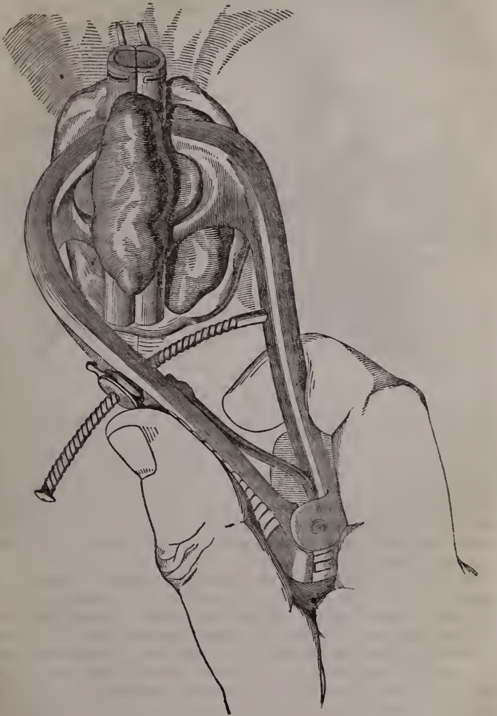

Fig. 4.

This figure represents a voluminous tumor caught with my forceps andvice with the caustic acting. For the representation of the pathological state, see Fig. 8.

The time, however, as may be supposed, varies according to the bulk of the tumors to be destroyed.

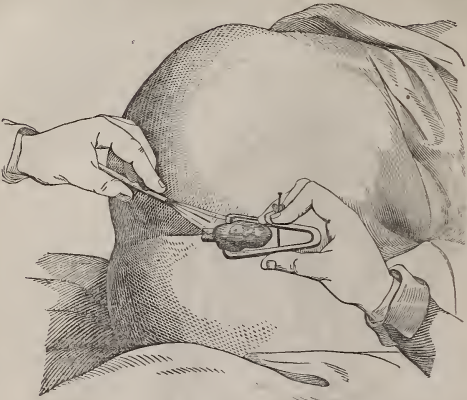

Fig. 5.

This figure represents the operator holding with his right hand the forceps placed upon the tumor, and directing the jet of cold water with the left.

The instrument is then gradually loosened and withdrawn, care being taken to re-cover the grooves to prevent the caustic touching the neighboring tissues. The assistants should keep the parts separated, and the patient should be again desired to make efforts at expulsion, that the cauterized tissues, on which a little caustic, the action of which is not yet over, still remains, may not cauterize those which should be protected.

The operation being over, the douches of cold water, both on the anus and internally, should be continued, so as to neutralize the last portions of caustic which may not have acted. I have often, with advantage, applied olive oil or vinegar and water to the cauterized parts.

Should a porte-caustique forceps not be at hand, the operation might be performed as follows:—The patient having been placed in the position I have described, and the same preparations having been made, the tumor it is wished to destroy should be seized, as high as possible, with an ordinary dressing or dissecting forceps, and cauterized directly, by placing in the centre a stick of Filhos' caustic cut into a conical shape, to which a rotatory motion should be given to make it penetrate the hemorrhoid, so as to destroy it centrally and laterally. It would be necessary, during the operation, to protect the surrounding parts with spatulas or paper knives, and afterward to wash the cauterized tumor with slightly acidulated water, so as to neutralize all the caustic which might not have combined with the tissues. The subsequent treatment should be the same as in the ordinary proceeding.

Immediately after the operation the patient is placed in a large bath, and when the tumors have been bathed for some moments they are returned. He remains in the bath for an hour, and sometimes longer, and always experiences great relief from it; for it is then he feels the action of the caustic, which had, during the operation, been masked by the pressure.

On coming out of the bath, cataplasms of linseed meal inclosed in muslin bags are applied to the anal region, or irrigations of tepid water are directed to the part, if smarting is still felt. The pain which patients experience after the operation is very variable; I have seen some who felt very acute smarting for twenty-four hours; but with the majority the painful sensation is, after some hours, but slight, if the precautions already mentioned have been observed. Some of my patients do not go to bed even the day of the operation; in general they remain sitting or lying on a sofa—for walking causes pain—and they are unable to go out for some days; elderly patients generally keep their room for a fortnight.

After the operation I allow but little nourishment, and that of a nature admitting of easy assimilation, in order to avoid action of the bowels, which always occasions acute pain. When the patients feel a desire to go to stool, I advise them to inject into the rectum two ounces of lard melted in a water bath; it is useful in facilitating the passage of the fæcal matters, and in diminishing the smarting caused by the motion. A tepid sitz-bath should be taken immediately after the stool. Sometimes I give, during the treatment, a gentle purgative, in order to remove constipation when the eschar is not yet detached; while it is, on the other hand, advisable that the patient should not go to stool at the time when the cauterized tumor is separating, in order to avoid the flow of blood which might then take place. An examination of the parts enables us to get a glimpse of the cauterized hemorrhoid, and to ascertain whether elimination proceeds more or less quickly; experience, however, has shown that, in general, the older and weaker the patients are the more slowly this process goes on. The falling off of the eschars requires a very variable time, generally from five to eight days. I have seen some become detached at the end of seventy-two hours, while in other patients they were still adherent fourteen days after the operation. To render the consequences of the operation as favorable as I have described, the patient ought to take every day several sitz-baths at a moderate temperature, rather cool than warm, to keep cataplasms or water-dressing constantly on the anal region, and to use a very light diet. When the swelling has disappeared the same treatment should be continued for some days, but the nourishment may be gradually increased; we may then, with advantage, form our opinion of the result of the operation, and decide whether it is necessary to cauterize other hemorrhoids.

Such are the operative manipulation and the treatment I employ in the affection under consideration.

(*To be Continued.*)

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

Proceedings of the Eighth Annual Meeting of the American Medical Association, held in Philadelphia, May 1st, 1855.

The Eighth Annual Meeting of the American Medical Association, was held in Philadelphia, in the Saloon of the Musical Fund Hall.

The session was opened at 11 o'clock, A.M., the President, Dr. C. A. Pope, of Missouri, in the chair.

The President called the Association to order, and announced that the first order of business was the reception of the report of the Committee of Arrangement on the Credentials of Members.

Dr. Hays, Chairman of that Committee, presented the Report.

The roll was then called by the Secretary, Dr. West. The following list comprises the number, not only of the Delegates and members in attendance at the opening of the session, but those also who subsequently presented themselves.

Maine, 9; New Hampshire, 5; Vermont, 5; Massachusetts, 54; Rhode Island, 8; Connecticut, 35; New York, 81; Pennsylvania, 130; New Jersey, 44; Maryland, 31; District of Columbia, 12; Virginia, 18; North Carolina, 5; South Carolina, 17; Georgia, 1; Alabama, 4; Tennessee, 3; Kentucky, 8; Ohio, 28; Indiana, 5; Illinois, 9; Missouri, 5; Iowa, 1; Wisconsin, 5; Michigan, 9; United States Navy, 4; Parisian Medical Society, 1.

On motion of Dr. Biddle, of Pennsylvania, the President, Dr. C. A. Pope, was now requested to deliver the annual address.

On motion of Dr. J. B. Biddle, of Pennsylvania, it was

Resolved, That the thanks of the Association be tendered to the President for his able and interesting address, and that he be requested to furnish a copy of it to the Committee of Publication.

On motion of Dr. J. B. Biddle, of Pennsylvania, it was

Resolved, That a committee of one member from each State represented be chosen by the respective delegations of each State, to nominate officers for the ensuing year.

On motion, a recess of five minutes was taken to enable the delegations to carry out the object of the above resolution.

At the termination of the recess, the Association was called to order, when each of the delegations reported their representative on the Nominating Committee, as follows:

Maine, A. J. Fuller; New Hampshire, Silas Cummings; Vermont, G. T. Elliott; Massachusetts, C. P. Fiske; Rhode Island, Jos. Mauran; Connecticut, P. A. Jewett; New York, John McCall; Pennsylvania, J. B. Biddle; New Jersey, Lewis Condict; Delaware, Jas. W. Thompson; Maryland, Charles McGill; District of Columbia, Thomas Miller; Virginia, B. R. Wellford; North Carolina, O. F. Manson; South Carolina, P. C. Gaillard; Georgia, Richard D. Arnold; Alabama, P. H. Cabell; Tennessee, J. Berrien Lindsley; Kentucky, C. J. Blackburn; Ohio, R. Hills; Indiana, Joel Pennington; Illinois, J. V. Z. Blaney; Michigan, A. B. Palmer; Missouri, L. B. Perry; Iowa, J. E. Sanborn; Wisconsin, J. B. Dousman; U. S. Navy, Thomas Dillard.

Dr. Condie, of Pennsylvania, offered the following resolution:—

Resolved, That all permanent members who, in consequence of not having received in due time notification of their indebtedness, have had their names stricken from the roll, but who have since paid, or may hereafter pay their assessment, shall have their names restored to the list of permanent members.

Dr. Watson, of New York, offered the following as an amendment:—

Resolved, That no permanent member of this Association shall be deprived of his privileges as a permanent member on account of failing to contribute to the funds at any meeting at which he is not in attendance.

After some debate, on motion of Dr. White, of New York, the above resolutions were referred to a committee of three, with instructions to report what action, if any, is expedient in the premises.

The chair appointed Dr. White, of New York, Dr. Watson, of New York, and Dr. Condie, of Philadelphia, this committee.

Dr. F. C. Stewart, of New York, offered the following resolution:—

Resolved, That the Nominating Committee be instructed to present three names to the Association as candidates for the office of President, that the election of President shall be by ballot, and that the candidate who shall have the smallest number of votes, shall be withdrawn after the first ballot;—which, on motion of Dr. Boyle, of D. C., was laid on the table.

On motion of Dr. Atlee, of Pennsylvania, it was

Resolved, That the Nominating Committee be instructed to recommend the place for the next annual meeting of the Association.

Invitations to the Association were extended respectively by Dr. Pitcher, of Michigan, on behalf of the medical profession of Detroit; by Dr. Foster, of Tennessee, on behalf of the profession of Nashville; and Dr. Brainard, of Illinois, on behalf of the profession of Chicago, to hold its next session in the above-named cities. These invitations were, on motion, referred to the Committee on Nominations.

On motion of Dr. Frank A. Ramsey, of Tennessee, it was

Resolved, That so much of the President's Address, as refers to the subject of the place and mode of meeting of the Association be referred to the Nominating Committee.

Dr. D. D. Thomson, of Kentucky, moved that the regular order of business be suspended, in order to take up the amendments to the Constitution offered at the last annual meeting.

Several members objected, and the motion was lost.

The President stated that the next business in order was the reception of "members by invitation," when, On motion of Dr. Condie, the names of all "members by invitation," were referred to the Committee of Arrangement.

The President announced that the next business in order was the reports of the different committees appointed at the last annual meeting.

Dr. La Roche, on behalf of the Committee on Prize Essays, reported that the committee had received six essays in competition for the prize offered by the Association. That, although these essays evinced much ability and extensive learning, but one was decided to possess those qualities which deserved the award of the prize. The essay was entitled "Statistics of Placenta Prævia." The accompanying envelope was opened, and the name of the author was announced as Dr. James D. Trask, of White Plains, New York.

On motion of Dr. Condie, it was

Resolved, That the essay be referred to the Committee on Publication.

The following committees were called upon, but no reports were received:—

1. Dr. Worthington Hooker, of New Haven, on the Epidemics of New England and New York.
2. Dr. John L. Atlee, of Lancaster, Pennsylvania, on the Epidemics of New Jersey, Pennsylvania, Delaware, and Maryland.
3. Dr. W. D. Haskins, of Richmond, Virginia, on the Epidemics of Virginia and North Carolina.
4. Dr. D. J. Cain, of Charleston, South Carolina, on the Epidemics of South Carolina, Florida, Georgia, and Alabama.
5. Dr. W. L. Sutton, of Georgetown, Kentucky, on the Epidemics of Tennessee and Kentucky.
6. The Committee on the Prevailing Diseases of Missouri, Illinois, Wisconsin, and Iowa, Dr. Reyburn, chairman, presented their report with an abstract of the same, which last was read; and the former was, on motion, referred to the Committee on Publication.

The regular order of business was here interrupted, by permission, in order to receive the report of a special committee, when Dr. White, on behalf of the committee to which was referred certain resolutions in regard to the duties and privileges of permanent members, reported the following resolutions, which were adopted:—

Resolved, That no permanent member, who is not present at a meeting of the Association, shall be required to pay the annual assessment; but no such permanent member shall be entitled to receive a copy of the printed *Transactions* unless he pay into the treasury a sum not less than the annual assessment paid by the delegates and permanent members in attendance; and that all the names of permanent members that have been left off the published list, be inserted therein in the next volume of *Transactions.*

Resolved, That no assessment whatever shall be made against members by invitation, but that they also be entitled to a copy of the printed *Transactions* by paying the sum assessed upon delegates in attendance.

The regular order of business was now resumed, which was the report of Standing Committees.

The following committees were in succession called, but no reports were received:—

7. Dr. George Mendenhall, of Cincinnati, Ohio, on the Epidemics of Ohio, Indiana, and Michigan.
8. Dr. E. D. Fenner, of New Orleans, Louisiana, on the Epidemics of Louisiana, Mississippi, Arkansas, and Texas.

9. Dr. James Jones, of New Orleans, Louisiana, on the Mutual Relations of Yellow and Bilious Remittent Fever.

10. Dr. D. F. Condie, of Philadelphia, Pennsylvania, on the Causes of Tuberculous Disease.

11. Dr. Joseph Leidy, of Philadelphia, Pennsylvania, on Diseases of Parasitic Origin.

12. Dr. A. P. Merrill, of Memphis, Tennessee, on the Physiological Peculiarities and Diseases of Negroes.

13. Dr. Joseph N. McDowell, of St. Louis, Missouri, on Statistics of the Operation for the Removal of Stone in the Bladder.

14. Dr. F. Peyre Porcher, of Charleston, South Carolina, on the Toxicological and Medicinal Properties of our Cryptogamic Plants.

15. Dr. Daniel Brainard, of Chicago, Illinois, on the Constitutional aud Local Treatment of Carcinoma.

16. Dr. George Engleman, of St. Louis, Missouri, on the Influence of Geological Formation on the Character of Disease.

17. Dr. Henry Taylor, of Mount Clemens, Michigan, on Dysentery.

18. Dr. Horace Green, of New York, on the Use and Effect of Applications of Nitrate of Silver to the Throat, either in Local or General Disease.

19. Dr. P. Claiborne Gooch, of Richmond, Virginia, on the Administration of Anæsthetic Agents during Parturition.

20. Dr. Charles Hooker, of New Haven, Conn., on the Diet of the Sick.

This report was read and referred to the Committee on Publication.

21. Dr. E. R. Dabney, of Clarkesville, Tennessee, on Certain Forms of Eruptive Fevers, prevalent in Middle Tennessee.

Dr. Sanford B. Hunt, of Buffalo, New York, from the Committee on the Hygrometrical State of the Atmosphere in various localities, and its influence on health, submitted a report, pending the reading of which

Dr. White, of New York, moved that this report, with the other reports of the Special Committees, be referred to the Committee on Publication, with the thanks of the Association to their authors.

Objections were urged against this course, and the motion was laid on the table by a very large vote.

The hour for terminating the session having then arrived, the Association adjourned.

WEDNESDAY, MAY 2.—The Association met at 9 o'clock, Dr. Pope, of Missouri, in the chair.

The minutes of yesterday's meeting were read and approved.

On motion of Dr. Condie, it was

Resolved, That the Secretaries of this Association be requested to afford every facility possible to the reporters of the public press, to enable them to furnish full and accurate reports of the transactions.

Dr. Atlee, of Pennsylvania, announced, on behalf of a committee of which he was the chairman, the completion of the stone ordered to be prepared as a contribution, on behalf of the Association, to the Washington monument.

Dr. Atlee appealed to the members to come forward and make up a handsome compensation for the young artist.

On motion of Dr. Sanders, of New York, it was

Resolved, That no member should speak unless his name and residence were first announced.

Dr. Hays then read the list of members and delegates, whose names had been registered since the calling of the roll on the previous day.

Dr. J. B. Biddle, of Pennsylvania, chairman of the committee of one from each State to nominate officers for the present year, reported the following as the unanimous nomination of the committee:—

President—Geo. B. Wood, M.D., of Pennsylvania.

Vice-Presidents—Wm. M. Boling, of Alabama; Daniel Tilden, of Ohio; D. Humphreys Storer, of Massachusetts; Grafton Tyler, of the District of Columbia.

Secretaries—Francis West, of Pennsylvania; R. C. Foster, of Tennessee.

Treasurer—Caspar Wister, of Pennsylvania.

Committee on Publication—Francis G. Smith, of Pennsylvania, Chairman; Francis West, of do.; Samuel L. Hollingsworth, of do.; H. F. Askew, of Delaware; Samuel Lewis, of Pennsylvania.

The committee also recommended, but not unanimously, *Nashville*, Tennessee, as the next place of holding the annual meeting.

On motion of Dr. Post, of New York, it was

Resolved, That the question of the confirmation of the officers, and of the place of meeting, be taken separately.

So much of the report as related to the nomination of officers, was then, on motion of Dr. Rogers, of Pennsylvania, adopted.

On motion of Dr. White, of New York, it was

Resolved, That a committee of three be appointed to inform the President and Vice-Presidents elect, of the choice of the Association, and to conduct them to their respective seats.

The chair appointed Drs. J. M. Smith, of New York; Blackburn, of Kentucky; Homans, of Massachusetts; Rouse, of Illinois; and Frost, of South Carolina. The officers were then conducted to their seats by the committee.

The President, on taking his seat, expressed his thanks to the Association in a neat and appropriate address for the honor conferred upon him.

On motion of Dr. Biddle, of Pennsylvania, the thanks of the Association were tendered to the retiring President, Dr. Charles A. Pope, and to Drs. Davis, Wragg, Green, and Fenner, late Vice-Presidents of the Association, to Dr. E. S. Lemoine, the retiring Secretary, and to Dr. Isaac Wood, of New York, the retiring Treasurer, for their able and faithful discharge of their respective duties.

Dr. Post, of New York, moved that the next place of meeting be the City of Washington.

Dr. Watson, of New York, moved, as an amendment, to substitute the City of Detroit for Washington.

Dr. L. A. Smith, of New Jersey, moved, as a further amendment, the substitution of Nashville for Detroit.

After some discussion, Detroit was selected as the place for the next meeting.

Dr. Foster, one of the newly elected Secretaries, then tendered his resignation, which was, on motion, accepted; and Dr. Brodie, of Michigan, was chosen to fill the vacancy.

Dr. C. Jones, of Ohio, was made a member by invitation.

The Association now proceeded to the regular order of business, which was the reception of the reports of committees, and the calling of the list was proceeded with.

22. Dr. Sanford B. Hunt, of Buffalo, New York. on the Hygrometrical State of the Atmosphere, in various Localities, and its Influence on health.

An abstract of this report was read by its author, and, on motion, the report was referred to the Committee on Publication.

23. Dr. Frank H. Hamilton, of Buffalo, New York, on the Frequency of Deformities in Fractures.

The author read an abstract of this report, and made some remarks on the objects aimed at in his investigations.

On motion, the report was referred to the Committee on Publication.

On motion of Dr. Hintzé, it was

Resolved, That a committee of one from each State be appointed by the chair to use their influence with the rail road and steam boat companies. in their respective States, to issue commutation tickets to the delegates to the American Medical Association, and their immediate families, who may design attending the meeting of the Association in May, 1856.

The following were appointed the committee:

Maine, Dr. E. R. Peaslee; New Hampshire, Dr. Josiah Crosby; Vermont. Dr. J. Perkins; Massachusetts, Dr. J. Homans; Rhode Island, Dr. Joseph Mauran; Connecticut, Dr. P. A. Jewett, *Chair'n;* New York, Dr. James P. White; Pennsylvania, Dr. Francis West; New Jersey, Dr. Lyndon A. Smith; Delaware. Dr. James W. Thompson; Maryland, Dr. F. E. B. Hintzé, *Sec.;* Dist. of Columbia, Dr. Grafton Tyler; Virginia. Dr. B. R. Welford; North Carolina. Dr. O. F. Manson; South Carolina, Dr. R. F. Michel; Georgia, Dr. Richard D. Arnold; Alabama, Dr. William M. Boling; Tennessee, Dr. J. B. Lindsley; Kentucky, Dr. C. J. Blackburn; Ohio, Dr. Daniel Tilden; Illinois, Dr. Rudolphus Rouse; Missouri, Dr. Charles A. Pope; Iowa, Dr. J. E. Sanborn; Wisconsin, Dr. J. R. Bartlett; Michigan, Dr. Zina Pitcher.

The hour of 12 M. having now arrived, a recess of one hour was taken, and the Association proceeded to the reception by the Mayor at Independence Hall.

Dr. Isaac Hays, of Philadelphia, in behalf of the Committee of Arrangements, introduced the members of the Association.

The Association reassembled at 1 P. M., the President, Dr. Wood, in the chair.

On motion of Dr. Davis, of Illinois, it was

Resolved, That the thanks of the Association be gratefully returned to the Mayor of the City of Philadelphia for the very cordial reception extended to it in Independence Hall, and also that a copy of his very eloquent address, and that of the chairman of the Committee of Arrangements, be requested for publication in the *Transactions* of the Association.

On motion of Dr. Askew, of Delaware, the rules of order were suspended for the purpose of allowing Dr. J. W. Thompson, of Delaware, to offer the following preamble and resolutions:

Whereas, That as few subjects of greater interest and importance could be presented to the consideration of the American Medical Association, now representing most of the States and Territories of the Union, than the attainment of a correct Medical Topography of each, with a history of its prevailing fevers and most successful treatment of the same, therefore be it

Resolved, That with this view and conviction, this Association appoint a Special Committee for each State and Territory represented, of —— members, whose duty it shall be to report upon its medical topography, epidemic fevers, and the most successful treatment thereof, and that the same shall continue to hold their office for three years.

Resolved, That as other States and Territories not now represented, become so by delegates duly appointed to this National Association, that similar committees shall be appointed for like purpose, and that they also shall hold their office for three years.

Resolved, That in the appointment of gentlemen of education and experience in the affairs of their own State, we have the best guarantee that the important objects we seek will be more satisfactorily accomplished, and the profession as well as the public interest will thereby be better served.

Resolved, That the committees heretofore appointed by this Association, at its session in Charleston, for a similar object, be, and the same are hereby discharged.

On motion of Dr. Askew, of Delaware, the foregoing preamble and resolutions were ordered to lie on the table and made the special order for to-morrow (Thursday) at 10 o'clock.

Dr. Earle, of New York, presented the report of the Committee on Publication, which was accepted, and, on motion, the following preamble and resolution accompanying it were adopted:

In view of the delay in publication, which is liable to be occasioned by the reference to the Committee on Publication, of reports and other papers of which abstracts alone are presented to the Association, the Committee would recommend for adoption the following resolution:

Resolved, That hereafter, beginning with the session for 1856, no report or other paper shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee on Publication on or before the first of June.

Dr. Biddle, of Pennsylvania, offered the following resolution, which was adopted:

Resolved, That the thanks of the Association are eminently due to the Committee on Publication for the faithful and highly satisfactory manner in which their arduous and responsible duties have been discharged.

Dr. Wood, of New York, presented his report as Treasurer of the Association, and also his account properly audited, which, on motion of Dr. Condie, of Pennsylvania, was accepted and referred to the Committee on Publication.

On motion of Dr. Watson, of New York, it was

Resolved, That one thousand dollars be appropriated to defray the expenses incurred by the committee in preparing the stone for the Washington monument, and that the balance necessary to make up the said sum beyond the money already collected by the committee, be drawn from the funds in the treasury prior to the opening of the present session.

Resolved, That Dr. Atlee, Chairman of the Committee, be authorized to draw upon the treasurer for the sum necessary to make up the balance.

The regular order of business, the reception of reports of Standing Committees, was then resumed.

24. Dr. M. M. Pallen, of St. Louis, Missouri, on Puerperal Convulsions.
25. Dr. G. S. Walker, of St. Louis, Missouri, on Diseases of the Prostrate Gland,
26. Dr. H. A. Johnson, of Chicago, Illinois, on the Execretions, as an Index to the Organic Changes going on in the system.

On motion of Dr. Davis, of Illinois, this committee was continued.

27. Dr. Leroy H. Anderson, of Sumpterville, Alabama, on Typhoid Fever and its Complications, as it prevails in Alabama.

28. Dr. W. H. Byford, of Evansville, Indiana, on the Pathology and Treatment of Scrofula.

An abstract of this report was read by the Secretary, and, on motion, the report was referred to the Committee on Publication.

29. Dr. N. S. Davis, of Chicago, Illinois, on the Nutritive Qualities of Milk, and the Influence produced thereon by Pregnancy and Menstruation, in the Human Female, and by Pregnancy in the Cow; and also on the Question whether there is not some mode by which the nutritive constituents of milk can be preserved in their purity and sweetness, and furnished to the inhabitants of cities in such quantities as to supersede the present defective and often unwholesome modes of supply.

This report was read, and on motion referred to the Committee on Publication, and the Committee on the subject continued.

The following preamble and resolutions were offered by Dr. W. J. C. Duhamel, of Washington, D. C., and adopted.

Whereas, The cause of humanity, and a due regard to public health, imperatively demand the speedy enactment of further and more stringent quarantine laws to prevent the spread of infectious diseases through our country; and, whereas, distinguished legislators have co-operated with the medical profession in bringing this important subject to the attention of Congress; therefore

Resolved, That, warmly approving of the bill introduced at the last session of Congress (and yet pending), to prevent sickness and mortality on shipboard, we cordially tender to the honorable Senators of the Special Committee, who so ably and earnestly advocated the measure, this expression of our sincere thanks for their unwearied exertions in behalf of the bill framed after the manner recommended by this Association, and yet indulge in the gratifying hope that their efforts in the cause of public welfare and of suffering humanity will be crowned with success.

Resolved, That the aforesaid preamble and resolutions be forwarded by the officers of the Association to the authorities at Washington.

THURSDAY, May 3d.—The Association assembled at 9 A. M., the President, Dr. Wood, of Pennsylvania, in the chair.

The minutes of the last meeting were read and approved.

The President stated that it had been usual to refer the appointment of the various standing committees to the Committee on Nominations. Whereupon, on motion of Dr. Watson, of New York, it was

Resolved, That these appointments be referred to that Committee.

The Association then proceeded to the consideration of the reports of the various committees.

30. Dr. E. B. Haskins, of Clarkesville, Tennessee, on Microscopical Investigations of Malignant Tumors.

A letter was read from the Chairman of this Committee, stating that he had not the means of carrying out the object of the Committee, and asking to be discharged, which was agreed to.

The following committees were called on, but no reports received:—

31. Dr. George R. Grant, of Memphis, Tennessee, on the Sulphate of Quinia as a Remedial Agent in the Treatment of Fevers.

32. Dr. R. R. McIlvaine, of Cincinnati, Ohio, on the Study of Pathology at the Bedside.

33. Dr. E. S. Cooper, of Peoria, Illinois, on Orthopædic Surgery.

34. Dr. Andrew F. Jeter, of Palmyra, Missouri, on the Modus Operandi of the Envenomed Secretions of Healthy Animals.

35. Dr. Samuel M. Smith, of Columbus, Ohio, on Insanity.

36. Dr. R. La Roche, of Philadelphia, Pennsylvania, on the Jaundice of Yellow Fever, in its Diagnostical and Prognostical Relations.

37. Dr. Charles Quarles Chandler, of Rocheport, Missouri, on Malignant Periodic Fevers.

38. Dr. S. B. Chase, of Portland, Maine, on Typhoid Fever in Maine.

A communication was read from Dr. Reyburn, of Mississippi, suggesting that the District, composed of Missouri, Illinois, Wisconsin, and Iowa, be divided, and also offering his resignation as Chairman of the Committee appointed to report upon the epidemics of those States, and on motion of Dr. Askew, of Delaware, it was

Resolved, That so much of said communication as refers to the division of districts be referred to the Committee on Nominations, and that the resignation of Dr. Reyburn be accepted.

39. The Committee on Plans of Organization for State and County societies, Dr. A. B. Palmer, of Michigan, was called, when the chairman stated that the Committee were not prepared to report.

40. Committee on Medical Literature, Dr. R. J. Breckenridge, of Kentucky, Chairman, was called, when a letter was read from the chairman, stating his excuses for not having his report prepared, and after considerable discussion the Committee was continued.

41. Committee on Medical Education, Dr. Wm. H. Anderson, of Alabama, Chairman, was called on, when a letter was read from the chairman, stating his reasons for not having his report ready, and asking to be continued.

After some discussion upon the general question of the propriety of continuing committees who failed to present their reports in time, on motion of Dr. J. L. Atlee, of Pennsylvania, it was

Resolved, That the further consideration of the subject be postponed in order to receive the report of the Committee on Nominations.

Dr. J. B. Biddle, Chairman of this Committee, made the following report:—

The Committee on Nominations, to which was referred the resolutions in reference to the appointment of a Committee on Medical Typography and Epidemics, report the resolutions with a recommendation that they be adopted.

They recommend the following gentlemen to compose the committee of one from each State and Territory, to be appointed in accordance with the resolutions, viz.:—

Maine, J. C. Weston, of Bangor; New Hampshire, Edmund R. Peaslee, Dartmouth College; Vermont, Joseph Perkins, of Castleton; Rhode Island, Joseph Mauran, Providence; Connecticut, Charles Hooker, New Haven; Massachusetts, George C. Shattuck, Boston; New York, Joseph M. Smith; New Jersey, Lyndon A. Smith, Newark; Pennsylvania, Jacob M. Gemmill, Huntingdon County; Delaware, James W. Thompson, Wilmington; Maryland, Peregrine Wroth, Chestertown; Georgia, John F. Posey, Savannah; Virginia, P. F. Peebles, Petersburg; District of Columbia, Thomas Miller, Washington; South Carolina, D. J. Cain, Charleston; North Carolina, O. F. Manson, ——; Kentucky, Wm. L. Sutton, Georgetown; Tennessee, E. B. Haskins, Clarkeville; Louisiana, E. D. Fenner, New Orleans; Minnesota, J. H. Murphy, St. Anthony's Falls; Ohio, G. Mendenhall, Cincinnati; Mississippi, T. J. Grafton, Rodney; Missouri, S. B. Alleyne; Michigan, J. H. Beech, Cold Water; Alabama, S. W. Chanton, Warsaw; Illinois, John Evans, Chicago; Indiana, Vierling Kersey, Milton, Wayne County; Wisconsin, Alfred L. Castleton, Delafield; Iowa, E. A. Arnold, Davenport; U. S. Navy, Thomas Dillard, Philadelphia; U. S. Army, Clement A. Finley.

The committee report that, in their opinion, it is inexpedient to make any change in the Constitution, in regard to the time and place of meeting of the Association.

The following special committees were appointed to report upon the subjects named:—

Dr. Lewis H. Steiner, of Washington, District of Columbia, on Strychnia—its chemical and toxicological properties.

Dr. Asbury Evans, of Covington, Kentucky, on Tracheotomy in Epilepsy.

Dr. J. Taylor Bradford, of Augusta, Kentucky, on the Treatment of Cholera.

Dr. Charles Q. Chandler, of Rocheport, Missouri, on Malignant Periodic Fevers.

Dr. H. A. Johnson, of Chicago, Illinois, on the Excretions as an Index to the Organic Changes in the System.

Dr. Henry J. Bigelow, of Boston, Massachusetts, on Microscopical Investigation of Malignant Tumors.

Dr. E. H. Davis, of New York, on the Statistics of Calculous Diseases, and the operations therefor.

Dr. J. S. Carpenter, on the Treatment and Curability of Reducable Hernia.

Dr. N. J. Fuller, of Maine, on the best Treatment of Cholera Infantum.

Dr. Wm. B. Page, of Philadelphia, on Injuries of the Joints.

Dr. Wilson Jewell, of Philadelphia, on the Statistics of Mortality in the United States.

Dr. J. Knight, of New Haven, Connecticut, on Endemic Tetanus.

Dr. P. H. Cabell, of Alabama, on the Native Substitutes for Cinchona, indigenous to the Southern States.

Dr. James M. Newman, of Buffalo, New York, on the Sanatory Police of Cities.

Dr. S. W. Noble, of Le Roy, Illinois, on Puerperal Fever and its Communicability.

Dr. J. M. Freer, of Chicago, Illinois, on the Progress of General and Descriptive Anatomy.

Dr. J. W. Corson, of New York, on the Causes of the Impulse of the Heart, and the agencies which influence it in Health and Disease.

Dr. D. Meredith Reese, of New York, on the Causes of Infant Mortality in large cities, the source of its increase, and the means for its diminution.

Dr. Mark Stevenson, of New York, on the Treatment best adapted to each variety of cataract, with the method of operation, place of election, time, age, &c.

Dr. Thomas Miller, of Washington, District of Columbia, on Toxicology.

Dr. E. R. Peaslee, of Hanover, New Hampshire, on Inflammation, its Pathology, and its relation to reparative process.

Dr. D. D. Thomson, of Louisville, Kentucky, on the Remedial Effects of Chloroform.

Dr. Wm. Clendennin, of Cincinnati, on Epidemic Erysipelas.

Dr. C. D. Comegys, of Cincinnati, Ohio, on the State of the Urine in Tubercular Diseases.

Dr. J. B. Coleman, of New Jersey, on the Effect of Mercury on the Living Animal Tissues.

Dr. T. G. Richardson, of Louisville, Kentucky, on the Diversity of the Venereal Poison.

Dr. J. B. Flint, of Louisville, Kentucky, on the best mode of rendering the Medical patronage of the national government tributary to the honor and improvement of the profession.

Dr. J. C. Hutchison, of Brooklyn, New York, on the Anatomy and Histology of the Cervix Uteri.

Dr. M. M. Latta, of Goshen, Indiana, on whether there are any means by which the Growth of the Fœtus in Utero may be controlled without injury to the Mother.

Committee to procure Memorials of the Eminent and worthy Dead—Dr. P. A. Jewett, of Connecticut; Dr. Thomas F. Betton, of Pennsylvania; Dr. C. J.

Blackburn, of Kentucky; Dr. Wm. M. Boling, of Alabama; Zina Pitcher, of Michigan.

Committee on Plans of Organization of State and County Societies.—Dr. A. B. Palmer, of Michigan; Dr. N. B. Ives, of Connecticut; Dr. E. B. Haskins, of Tennessee; Dr. Charles Woodward, of Ohio; Dr. Josiah Crosby, of New Hampshire.

STANDING COMMITTEES.—*Committee on Arrangements.*—Dr. Zina Pitcher, of Detroit; Dr. Moses Gunn, do.; Dr. G. B. Russell, do.; Dr. A. S. Leland, Dr. Morse Stewart, Dr. Peter Klein, Dr. J. A. Brown.

Committee on Prize Essays.—Dr. A. B. Palmer, of Michigan; Dr. Samuel Denton, Dr. A. R. Terry, Dr. Adam Sager, Dr. S. H. Douglass, Dr. Corodon La Ford, Dr. E. Andrews..

Committee on Medical Literature.—Dr. P. C. Gaillard, of South Carolina; Dr. N. P. Monroe, of Maine; Dr. James Couper, of Delaware; Dr. R. Hills, of Ohio; Dr. A. Coffin, of South Carolina.

Committee on Medical Education.—Dr. J. Berrien Lindsley, of Tennessee; Dr. J. B. Flint, of Kentucky; Dr. P. H. Cabell, of Alabama; Dr. George Hayward, of Massachusetts; Dr. E. B. Smith, of Missouri.

On motion, the report of the Committee was adopted.

The subject of the report of the Committee on Medical Education was taken up, and after considerable discussion Dr. Lindsley, the chairman of the newly-appointed committee on the subject, asked leave to resign, and that Dr. Anderson, of Alabama, chairman of the former committee, be appointed in his place.

Whereupon Dr. Lindsley's resignation was accepted, and Dr. Anderson appointed in his place.

A letter from Dr. W. Hooker, Chairman of the Committee on the Epidemics of New England and New York, was read, in which he points out the defects of the present organization of the Committee on Epidemics, and asks to be discharged from the further consideration of the subject.

On motion of Dr. Hays, the letter was referred to the Committee on Nominations.

Dr. F. H. Hamilton, of New York, asked and obtained leave to make some remarks on fracture of the clavicle, supplementary to his report made yesterday.

The special order of the day, the resolutions in reference to the appointment of Committees on Medical Topography, offered by Dr. Thompson, of Delaware, was taken up.

After some remarks by Dr. Thompson, advocating their adoption, Dr. Askew, of Delaware, offered the following additional resolution, which was accepted by Dr. Thompson:—

Resolved, That all reports on the Medical Topography and prevailing diseases of States, shall, to entitle them to be received by this Association and published in the proceedings, be first approved by the Medical Societies of the State or Territory where such Societies exist, and to which State or Territory such report refers.

The preamble and resolutions presented yesterday by Dr. Thompson, were then adopted.

Dr. J. G. Orton, of Binghamton, New York, read a series of resolutions which he had prepared in reference to the same subject. They were as follows:—

Resolved, That each County Medical Society (or in parts of the country where such societies have not been established, any duly organized medical association), be invited to amend their constitutions by attaching thereto the following article : "It shall be the duty of each member of this Society to keep a faithful record of the diseases which may fall under his observation during each month, according to the classification adopted by this Convention in May, 1847, stating the age and sex, occupation, and nativity of the patients, the average duration of the disease, and, finally, their recovery or death, and to report the same in writing to the Secretary on or before the first day of February of each year, who shall transmit a digest thereof to the State Medical Society, and also to the appropriate committee appointed by the American Medical Association for its reception."

Resolved, That each incorporated Hospital, Infirmary, and Asylum, be invited to furnish a copy of their annual reports, for the use of the committee of their respective States.

Resolved, That the State Committee appointed by this Association to report upon the prevailing diseases of their respective localities, shall receive and arrange a digest of the reports transmitted to them by the Secretaries of the various county societies, and report the same at the annual meeting of this Association.

Resolved, That the first day of January be the time fixed at which the object of these resolutions shall be carried into effect, and that the several county societies and associations be requested to amend their constitutions as heretofore recommended, at as early a date as practicable, and to report to the State Committee their willingness or unwillingness to acquiesce in the request of this Association.

On motion, the above resolutions were referred to the Committee on Nominations.

The reports of Committees were again proceeded with.

The President stated that Dr. D. J. Cain, appointed to report on the epidemics of South Carolina, Florida, Georgia, and Alabama, was confined at home by sickness.

The Committee on the epidemics of Tennessee and Kentucky, not being ready to report, was continued.

A letter was read from Dr. Fenner, appointed to report on the epidemics of Louisiana, Mississippi, Arkansas, and Texas, stating that his report was in progress.

On motion, the committee was continued.

Dr. D. Francis Condie, to whom was referred the subject of tubercular disease, stated that he had been engaged for a period of three years in examining and arranging a report on this subject. The report will occupy at least five hundred pages, and one reason which has caused it to swell to so great an extent, is, that he found it necessary to contradict a large number of statements on the subject. He hoped that the Association would excuse him in not being quite ready with the report. He had prepared a digest of its contents, which in fact is merely an index to the whole, and would not of itself repay for the time used in reading it. He expressed a desire that the Association would excuse him.

A motion was made that Dr. Condie be permitted to adopt such course as may be most agreeable to himself in regard to the publication of his report, free from any obligation he may consider himself under to the Association. The motion was agreed to.

The Committee on the Constitutional and Local Treatment of Carcinoma, Dr. Daniel Brainard, of Chicago, Illinois, not being ready to report, was continued.

The Committee on the Applications of Nitrate of Silver to the Throat, Dr. Horace Green, of New York, chairman, stated that a longer time was required in order to collect the materials necessary for a report. On motion, the committee was continued.

The Committee on Dysentery, Dr. Henry Taylor, of Mt. Clemens, Michigan, chairman, presented, through Dr. Beech, an abstract of the report which was read, and, on motion, the report was referred to the Committee on Publication.

The Committee on Hydrophobia and the Connection of the Season of the Year with its Prevalence, Dr. T. W. Blatchford, of New York, chairman, presented a partial report which was read, and, on motion of Dr. Smith, of New York, the committee was continued.

Committee to inquire into the Causes which obstruct the formation and establishment of our National Medical Literature, Dr. S. D. Gross, of Kentucky, Chairman.

A letter was read from the Committee stating the reasons for the report not being ready, and, on motion, the Committee was continued.

Committee to report the best means of preventing the introduction of Disease by Emigrants into our country, Dr. S. H. Dickson, of South Carolina, Chairman, were called upon, when a letter, written soon after the adjournment of the last meeting of the Association, declining the appointment, was read.

The hour for recess having arrived, adjourned.

The Association reassembled at 1 P. M., the President, Dr. Wood, in the Chair, and the regular order of business, the calling for reports from Committees, was proceeded with.

Dr. R. D. Mussey, of Ohio, the Committee to examine into, and report upon, the effects of Alcoholic Liquors upon the system in health and disease, read his report, which was, on motion, referred to the Committee of Publication.

Dr. E. S. Cooper, of Peoria, Illinois, on Orthopædic Surgery. No report.

Dr. Andrew F. Jeter, of Palmyra, Missouri, on the Modus Operandi of the Envenomed Secretions of Healthy Animals. No report.

Dr. Samuel M. Smith, of Columbus, Ohio, on Insanity.

By request of Dr. Smith, this Committee was continued.

Dr. R. La Roche, of Philadelphia, Pennsylvania, on the Jaundice of Yellow Fever, in its Diagnostical and Prognostical Relations.

This Committee was not ready to report, and was continued.

Dr. Charles Quarles Chandler, of Rocheport, Missouri, on Malignant Periodic Fevers. No report.

Dr. S. B. Chase, of Portland, Maine, on Typhoid Fever in Maine, No report.

An motion of Dr. Thomas, of Maryland, the resolution referring the report on Medical Literature to the Committee on Publication was reconsidered, when, on motion of Dr. Gibson, of Virginia, the further consideration of this subject was postponed until to-morrow.

On motion of Dr. Jewett, of Connecticut, it was

Resolved, That a Committee of one from each State be appointed to report upon a uniform system of marriages, births, and deaths; and the resolution was referred to the Committee on Nominations, to report the names of the Committee.

The Association then adjourned.

On Friday, May 4, the Association met at 9 A. M., the President, Dr. Wood, of Philadelphia, in the chair,

The minutes of the last meeting were read and approved.

On motion of Dr. Lemoine, it was resolved that the nomination of a chairman of the Committee on the Epidemics of Missouri, be referred back to the Committee on Nominations.

Dr. Atlee offered a resolution that Dr. Breckenridge's report on Medical Literature be referred to a special Committee, to be read, and if approved by said Committee, then that it be referred to the Committee on Publication. The motion was lost.

A motion was then made and adopted, that the Committee on Medical Literature be continued, to report at the next meeting of the Association.

Dr. Hayward, of Boston, offered the following, which was adopted unanimously:—

Resolved, That the thanks of this Association be presented to his Honor the Mayor, and the other officers of the city government, and to the citizens and physicians of the city of Philadelphia, for their kind and continued attentions, and munificent hospitality to the members of this Association during its present session.

Dr. J. L. Atlee, of Pennsylvania, presented and read a report, on behalf of the Committee appointed at the last annual meeting of the Association, and to which was referred the Essay of Dr. Phelps, of New York, on "Religion as an Element in Medicine, or the Duties and Obligations of the Profession," and also the communication of Dr. R. S. Bailey, of South Carolina, on the same subject, with instructions to consider and report on the expediency of publishing the same. The report was accompanied with the following resolution:—

Resolved, That it is inexpedient to publish, in our *Transactions*, the Essay of Dr. Phelps.

The Committee state that, having expressed their sentiments on the subject, they beg to be discharged from the further consideration of Dr. Bailey's paper.

After a brief discussion, the previous question was demanded and sustained, and the report was accepted, the accompanying resolution adopted, and the request to be discharged granted.

Dr. Charles Hooker, of Connecticut, offered the following amendment to the Constitution, which, under the rules, lies over until the next annual meeting of the Association.

"Any permanent member who shall not pay for the published *Transactions* for three successive years, shall be considered as withdrawn.

Dr. N. S. Davis, of Chicago, Illinois, submitted the following preamble and resolutions:—

Whereas, The present mode of conducting the annual meetings of the Association affords but little opportunity for the discussion of strictly scientific questions and papers, and

Whereas, This has been regarded as a serious defect in the operation of our organization, impairing its scientific character; therefore, *Resolved,* That the daily sessions of the Association during each annual meeting, be divided into two parts—the first to terminate at an hour not later than 12½ o'clock P. M., each day, and to be devoted, as heretofore, to the general business of the Association—the second, consisting of all the time which it is deemed advisable to remain in session each day, after 12½ o'clock P. M., to take the character of a scientific session, and to be devoted exclusively to the discussion of questions relating to the science and art of medicine.

Resolved, That the Association, in its capacity of a scientific session, having no power to act on any subject except of a scientific character, may continue in session, whenever thought advisable, a longer period than in its most general capacity.

Resolved, That the foregoing preamble and resolutions be referred to the Committee on Arrangements with instructions to report on the same at the commencement of the next annual session.

Dr. C. G. Comegys, of Ohio, offered the following preamble and resolutions, which were, on motion, referred to the Committee on Nominations:—

Whereas, The American Medical Association, though devoting itself ardently to the interest of medical science, is unable to accomplish all its aims for the promotion of the usefulness of the profession in society without the aid of legislation, therefore

Resolved, That the members of the medical profession throughout the Union be urgently requested to take immediate and concerted action for petitioning their several legislative bodies to establish offices for the collection of vital statistics.

Resolved, That for the purpose of securing an ample number of petitioners for this object, this Association suggests that every member of the profession shall endeavor to secure the name of his personal friends.

Resolved, That a copy of the above resolutions be transmitted at once to the several State societies.

Dr. A. J. Semmes, of Washington, D. C., offered the following, which was adopted:—

Resolved, That a Committee of three be appointed to report to the Association at its next annual meeting what measures should be adopted to remedy the evils existing in the present methods of holding coroners' inquests, by incompetent persons, by which the lives and liberties of the innocent may be jeoparded, and the ends of justice frustrated.

The President appointed Dr. A. J. Semmes, of Washington; Grafton Tyler, of D. C.; and Dr. D. F. Condie, of Pennsylvania, that Committee.

Dr. F. C. Stewart, of New York city, offered the following resolutions, which were unanimously adopted:—

Resolved, That the thanks of the American Medical Association be, and they are hereby tendered, to the Committee of Arrangements for the liberal and cordial reception extended to its members during the present session.

Resolved, That a similar acknowledgment is eminently due, and also unanimously extended, to the officers, trustees, and managers of the several public and private institutions of the city and vicinity, which have been thrown open to the inspection of the members of the Association, the visitation of which has been a source of unmingled satisfaction, and the management of which manifests the faithful and zealous care of those to whose guardianship they have been intrusted.

Dr. Biddle, Chairman of the Committee on Nominations, to whom was referred the resolution of Dr. Jewett, "that a Committee of one from each State be appointed by this Association to report upon a uniform system of Registration of Marriages, Births, and Deaths," made a report, recommending the adoption of the resolution, and presenting the following list of names to constitute said Committee:—

Dr. M. W. Wilson, of Hartford, Connecticut, *Chairman;* Dr. G. S. Palmer, of Gardiner, Maine; Dr. Silas Cumming, Fitz-William, New Hampshire; Dr. G. T. Elliott, Woodstock, Vermont; Dr. Edward Jarvis, Dorchester, Massachusetts; Dr. Joseph Mauran, Providence, Rhode Island; Dr. Jno H. Griscom, New York, New York; Dr. Henry Carpenter, Lancaster, Pennsylvania; Dr. O. H. Taylor, Camden, New Jersey; Dr. Lewis P. Bush, Wilmington, Delaware; Dr. A. Snowden Piggott, Baltimore, Maryland; Dr. David H. Tucker, Richmond, Virginia; Dr. N. J. Pittman, of Tarboro, North Carolina; Dr. Harvey Lindsley, Washington, District of Columbia; Dr. Jno. L. Dawson, Charleston, South Carolina; Dr. R. D. Arnold, Savannah, Georgia; Dr. A. Lopez, Mobile, Alabama; Dr. James Jones, New Orleans, Louisiana; Dr. R. C. Foster, Nashville, Tennessee; Dr. C. J. Blackburn, Covington, Kentucky; Dr. Jno. Dowson, Columbus, Ohio; Dr. Edmund Murphy, New Harmony, Indiana; Dr. N. D. Stebbins, Detroit, Michigan; Dr. J. V. Z. Blaney, Chicago, Illinois; Dr. Geo. D. Wilbur, Mineral Point, Wisconsin; Dr. Wm. McPheeters, St. Louis, Missouri; Dr. J. D. Elbert, Keosaqua, Iowa; Dr. Jno. H. Murphy, Falls of St. Anthony, Minnesota.

Mississippi and Arkansas were left blank.

The Committee recommended the addition of the following Special Committee:—

Dr. M. M. Latta, of Goshen, Indiana, on "Whether there are any Means by which the Growth of the Fœtus in Utero may be controlled without Injury to Mother or Child."

Dr. Thomas Miller, of Washington, District of Columbia, on Toxicology.

Dr. E. R. Peaslee, of Hanover, New Hampshire, on Inflammation—its Pathology, and its Relation to the Reparative Process.

Dr. D. D. Thomson, of Louisville, Kentucky, on the Remedial Effects of Chloroform.

Dr. Wm. Clendennin, of Cincinnati, Ohio, on Epidemic Erysipelas.

Dr. C. G. Comegys, of Cincinnati, Ohio, on the State of the Urine in Tubercular Disease.

The report of the Committee was adopted.

Dr. J. L. Atlee, of Pennsylvania, offered the following resolutions, which were adopted:—

Resolved, That to secure efficient teaching in medical schools, where the prime object is to enforce practical precepts, a large degree of union and harmony must exist among the teachers, and confidence be reposed in them by their pupils.

Resolved, That any such unnatural union as the mingling of an exclusive system, such as homœopathy, with scientific medicine in a school, setting aside all questions of its untruthfulness, cannot fail by the destruction of union and confidence and the production of confusion and disorder, unsettling and distracting the mind of the learners, to so far impair the usefulness of teaching as to render every school adopting such a policy unworthy the support of the profession.

Dr. A. B. Palmer, of the University of Michigan, seconded the resolutions.

Dr. Foster, of Tennessee, offered the following resolution, which, on motion, was laid on the table:—

Resolved, That the State Medical Societies be requested to hold their annual meetings just one month before the meeting of the American Medical Association.

Dr. Clendennin, of Cincinnati, Ohio, offered the following:—

Resolved, That no State or local society shall hereafter be entitled to representation in this Association that has not adopted its code of ethics.

Resolved, That no State or local society that has intentionally violated or disregarded any article or clause in the code of ethics, shall longer be entitled to representation in this body.

Dr. L. A. Smith offered a resolution to lay these resolutions on the table, which, after discussion, was lost.

Dr. Miltenberger, of Maryland, offered as an amendment the following preamble and resolutions, to be appended to the resolutions of Dr. Clendennin:—

Whereas, It has been brought to the notice of the American Medical Association that the State Medical Society of Ohio violated at their last meeting one of the articles of its code of ethics. Therefore

Resolved, That the Secretary of this Association be directed to inform the officers of that society, that unless such action be rescinded, they cannot hereafter be represented in this Association.

Dr. J. L. Atlee, of Pennsylvania, offered as amendment to the foregoing preamble the addition thereto of the particular obnoxious action alluded to. The amendment was accepted by Dr. Miltenberger, and the resolutions of Dr. Clendennin, with the preamble and resolutions of Miltenberger, as amended by Dr. Atlee, were adopted. The resolutions as adopted are as follows:—

Resolved, That no State or local society shall be hereafter entitled to a representation in this Association, which has not adopted the code of ethics.

Resolved, That no State or local society which has violated or discarded any article or clause in the code of ethics, shall longer be entitled to a representation in this body.

Whereas, It has been brought to the notice of the American Medical Association that the State Medical Society of Ohio violated, at their last annual meeting, one of the articles of its code of ethics by adopting a resolution, 'That it is not derogatory to medical dignity or inconsistent with medical honor for medical gentlemen to take out a patent-right for surgical or medical instruments.' Therefore,

Resolved, That the Secretary of this Association be directed to inform the officers of the Medical Society of Ohio, that unless such action be rescinded, they cannot hereafter be represented in this Association.

Dr. A. Stille, of Pennsylvania, offered the following resolutions, which were adopted:—

Resolved, That a special committee of five be appointed to report at the next meeting of the Association upon the following question:—

Might not the present system of repeating the same lectures to the same classes during two successive terms be usefully modified by extending the lectures of each chair over two sessions, so as to embrace systematic and complete discussion of each of the following subjects?:—

1. Special, Regional, and General Anatomy, including illustrative references to Morbid Anatomy.
2. Inorganic, Organic, and Pharmaceutical Chemistry and Toxicology.
3. General and Human Physiology, Hygiene, Medical Jurisprudence.
4. Medical Botany, Materia Medica, Therapeutics.
5. General Pathology, Morbid Anatomy (systematic), Practice of Medicine.
6. General Surgical Pathology, or Institutes of Surgery, Mechanical Operative, and Medicinal Surgery.
7. Obstetrics, Diseases of Women, Diseases of Children.
8. Hospital Clinical Medicine and Surgery.

Resolved, That the committee, at an early day, address the several medical colleges in regard to the proposed plan of instruction, requesting from them an official expression of opinion upon its merits and feasibility.

On motion of Dr. Pitcher, it was

Resolved, That the committee under the above resolutions be appointed by the President, and that he be allowed to do this after the final adjournment of the Association.

The President has appointed the following committee under the preceding resolutions:—

Dr. Alfred Stille, of Philadelphia, chairman; Professor Samuel Jackson, of Philadelphia; Dr. John Bell, of Philadelphia; Dr. John Watson, of New York; and Dr. A. L. Cabell, of Charlottesville, Virginia.

Dr. Levi D. Scheets, of Ohio, offered the following alteration to the Constitution, which, under rule, lies over until the next meeting:—

Whereas, It has been found necessary to devise some means of elevating the standard of education, both professional and general, among medical men, by those who are best acquainted with the sad and lamentable deficiency which prevails in this respect among a large mass of the profession, and particularly in the Western States. And,

Whereas, Efforts to this effect at home have been opposed on the ground that more was exacted by such as took an active part in the matter than is required by the "American Medical Association." And,

Whereas, It is believed that the National Society can exert a beneficial influence over the whole country. Therefore,

Resolved, That the Constitution of the Association be so amended as to require all delegates, before being allowed a seat in said Association, to satisfy the proper authorities that the societies which they represent, require *graduation* as the *sine quâ non* to membership therein, and that no person can become a permanent member, a member by invitation, or can be received as a delegate from any other body, unless he be a graduate of some respectable medical school.

Resolved, That the editors of the various medical journals of the United States be requested to publish the foregoing, so that an interest may be awakened upon this subject, and that societies may be prepared to comply with the above requisitions in case they meet the approval of this Association.

Dr. Corson, of New York, asked and obtained leave to read a brief abstract of a paper "On the influence of Lead upon the Heart's Action, and the Importance of the Study of the Cardiac Impulse in Disease generally, founded upon a Series of Observations."

On motion, it was referred to a special committee of three with instructions, if they approve of it, to transmit it to the Committee of Publication for insertion in the *Transactions.*

Drs. Charles D. Davis, Isaac Wood, and F. Campbell Stewart, of New York, were appointed the committee.

Dr. Thomas, of Baltimore, read a paper on a simple and easy method of applying nitrate of silver to the air-passages, contrived and employed by the author's brother, Dr. John Chew Thomas, about six years since. It consists in applying a stick of caustic lightly to a fine grindstone or emery wheel made to revolve with great velocity. The caustic is thus thrown off in an impalpable powder which may be inhaled by the patient sitting before the stone.

On motion of Dr. Emerson, the paper was referred to a committee of three with instructions, if they deem it worthy of insertion in the *Transactions*, to transmit it to the Committee on Publication.

Drs. Emerson, of Philadelphia, Miltenberger, of Maryland, and R. P. Thomas, of Philadelphia, were appointed that committee.

Dr. Atlee offered the following resolution, which was adopted:—

Resolved, That the subject of the contagiousness or non-contagiousness of cholera be especially recommended to the attention of the State Committee on Epidemics, State Topography, etc.

On motion of Dr. Hintzé, of Maryland, it was

Resolved, That the thanks of the Association be presented to the several railroad and steamboat companies which have courteously issued commutation tickets to the members of the Association for the present meeting.

The proposition offered at the last annual meeting by Dr. S. D. Gross, of Kentucky, to amend that part of the Constitution which relates to the election of officers, so that the election shall take place immediately before the adjournment of each meeting, instead of immediately after its commencement, was called up, and, on motion, indefinitely postponed.

The proposition offered at the last annual meeting by Dr. F. A. Ramsay, of Tennessee, that the Constitution be so amended as to dispense with the Nominating Committee, and the duties of such committee, was, on motion, rejected.

Dr. N. B. Ives, of Connecticut, proposed the following amendment to the Constitution, to be appended to the end of the second article :—

"The Association shall, at all times, have power to punish any of its members by reprimands, suspension, or expulsion, upon a three-fourths vote of the members present at any meeting, at which not less than one hundred are in attendance."

Dr. Dorset, of Virginia, offered the following amendments to the Constitution :—

Resolved, That with a view of adding dignity and influence to our body, and conveying a more adequate idea of its national representative character, the title "National Medical Congress" be substituted for that of "American Medical Association," and that we hold our sessions at least once in three years in Washington, D. C.

Dr. A. M. Pollock offered the following resolution :—

Resolved, That no organization or institution, entitled to representation in this Association, shall be considered in good standing which has not adopted its code of ethics.

Dr. Lemoine, of Missouri, called up the amendment to the Constitution offered last year by Dr. Byford, to change the name of the "Committees on Epidemics" to "Committees on Prevailing Diseases."

On motion, the proposed amendment was rejected.

There being no further business, the Association then, on motion, adjourned *sine die.—Condensed from Med. News.*

COMMUNICATIONS.

Atmospheric and Mortuary Observations in New York, comprising the first half year of 1855. By J. P. Loines, M.D., of New York.*

It is presumed that the patient comparison of the different columns in the accompanying table will enable any physician to draw instructive conclusions. The necessary explanations of the different headings, &c., will be given, and incidentally a few apparently obvious deductions will be exhibited. The weeks end with Friday, about 24

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* From papers read before the Society of *Statistical Medicine* from January to June, 1855.

	1855.	WEATHER MEAN OUT-DOOR.													In-door at 79°.		AGGREGATE MORTALITY AND BURIALS.																
																		Classification.														
Weeks.	7th Ward, New York. Remarks.	Temperature.	Evaporation below.	Dew-point below.	Daily range.	Inches Rain and melted Snow.	N. W. & S. W. winds.	E. & N. E. winds.	S. & S. E. winds.	Mostly clear.	Mostly cloudy.	Grains of Vapor in a cubic foot of air.	Additional weight required to saturate.	Mean humidity, saturation being 100.	Mean humidity, healthiest weather in the year being 100.	Mean Barometer.	Total No. Deaths.	Brain & Nerves.	Lungs & Throat.	Digest. System.	Eruptive Fevers	Other Fevers.	Adults.	Children.	Under two years.	American.	Irish, &c.	German, &c.	Ward's Island Hosp.	Other Charities.	Catholic Cemeter's.	Paupers' Cemeter's.
1	Damp, for winter	35°	1½°	3½°	7½°	0	2	5	9	2½	4½	2·30	·50	80	46	30·40	479	113	131	75	27	16	212	267	197	276	111	50	26	37	173	95
2	" " "	37¼	2	4½	7	¼	3½	3½	----	2½	4½	2·37	·63	79	47	39·40	413	90	120	72	26	19	148	265	179	266	75	55	55	23	144	93
3	Drier	32	2¾	6½	8	0	4¾	2¼	----	3¼	3¾	1·99	·56	77	40	30·00	467	82	150	67	39	14	171	296	214	300	99	51	69	36	172	116
4	"	30	3	7	11½	3	4	3	----	3	4	1·89	·47	75	37	29 69	437	102	144	61	46	13	165	272	198	308	75	39	50	24	157	82
5	"	27	4½	10½	9	1¼	3¾	3¼	----	3¾	3½	1·46	·70	72	29	30·00	511	108	160	79	49	24	182	329	230	348	78	64	60	41	179	134
6	Driest	15	5	11½	11	2	2	5	----	1½	5½	·961	·49	66	19	34·00	485	95	164	66	39	22	159	326	233	335	78	54	65	25	163	163
7	Dry	26	3½	8	7½	3	4	3	----	3¼	3¾	1·54	·55	73	31	30·21	550	108	177	98	35	29	203	347	245	357	109	65	84	36	104	176
8	Drier	29	6	14	11	¼	6½	½	----	5¾	1¼	1·40	89	61	28	30·18	521	101	185	89	31	27	198	323	239	362	79	57	51	42	169	117
9	Very dry	21½	6¾	16	15	9	7	0	----	6½	½	1·00	·70	59	20	30·21	532	115	191	67	43	34	229	303	215	342	99	78	57	43	166	119
10	Damp, for winter	39	5½	13	14	0	6½	½	----	5	2	2·04	1·11	64	41	36·00	491	113	131	75	30	44	189	302	222	336	77	54	42	32	169	104
11	Damper	34	3	7	10	1-7	5	1½	½	2½	4½	2·13	·58	78	42	29·93	515	102	169	68	30	44	190	325	228	336	104	47	46	40	188	125
12	Drier	35½	5	11½	11	0	5⅝	1½	0	5½	1¾	1·91	1·02	63	39	30·00	456	95	158	00	30	29	177	279	185	330	64	41	37	23	169	117
13	"	35	6	14	18	0	6½	½	----	6	1	1·71	1·09	61	38	29·82	493	88	166	74	42	30	309	293	212	324	83	58	49	17	171	100
14	Damper	42	7	10½	20	1	5½	1	½	5	2	2·00	1·49	57	44	29·98	441	115	128	53	26	16	147	294	215	317	68	42	29	25	164	85
15	"	50	5	11½	16	¼	3½	2	1¾	3½	3½	3·06	1·17	74	60	30·15	479	111	145	62	35	22	174	395	196	329	84	49	47	26	167	90
16	"	52	4	9½	15	¼	4½	2½	0	3	4	3·09	1·94	80	61	29.91	479	73	152	73	59	20	174	305	191	331	88	46	35	40	168	92
17	"	53	6	14	10	1-25	3½	9	3½	4	3	3 10	1 94	61	63	30·00	399	87	131	50	45	20	149	259	166	280	50	31	23	34	147	65
18	Drier	52½	6	14	8	1-20	3	1	3	4	3	3·03	1·80	61	61	29.98	438	85	135	79	37	19	177	261	197	320	81	38	37	50	154	75
19	"	55½	7	16½	18	1¾	4¾	2	½	4½	2½	3·05	2·29	56	61	29·99	431	84	133	80	44	23	155	276	175	311	70	40	18	38	128	73
26	Sultry	[illegible]	11	25½	21	½	6	½	½	5	2	3·23	4·03	47	64	30·15	457	92	155	78	49	14	190	267	191	316	90	28	18	40	173	91
21	Damper	65	8	18½	16	2¾	4	1	2	3½	3½	3 92	3 51	51	78	29·90	394	91	99	61	41	24	136	258	165	281	80	26	12	37	160	51
22	Drier	65	11¼	26	15	9	5	9	2	5½	1½	2·99	4·24	41	60	30·18	399	77	114	81	29	29	147	252	180	291	79	27	22	28	145	65
	Model Week.																															
23	Healthiest weather in the year	64	5½	13	8	2½	3	9	4	3	4	4·56	2·48	65	92	30·08	356	71	99	61	30	27	175	231	142	266	54	30	17	31	119	73
24	Fine	66	8	18½	14	½	6		1	5½	1½	4 04	3.38	54	81	29 98	353	77	09	52	35	9	107	246	160	260	57	31	22	18	111	58
25	Very damp	66½	6	14	13	½	1	1½	4½	2½	4½	4·89	3·	63	96	29·84	322	69	79	50	41	13	99	223	163	231	62	20	16	21	128	61

hours before the termination of the official weeks of the City Inspector. This has enabled us to make some valuable comparisons of the weather and consequent mortality; since, in the weeks having extreme dryness or moisture, or low or high temperatures prevailing, the influence is often so direct in this city, that the mortality for the week instant is immediately increased, while on the contrary, we find temperate Spring and Autumn weather influencing chiefly the mortality in the few succeeding weeks. These conclusions are clearly shown in the table. For example, compare the different columns of the cold 6th and 7th weeks with each other, and also in the same manner those of the mild 20, 21, 22, 23 and 24th weeks. The 2nd column was collated with the 13th and 16th, to show a relatively dry or damp day as affecting the health of those breathing our atmosphere both in and out of doors. The 3rd column shows, as nearly as possible, the true mean temperature as derived from five daily observations of the maximum and minimum thermometers. This is thought to be a better method of obtaining the true mean, than that from *one* daily observation of the extremes, which only serves to give us the true mean of the temperate seasons and equinoctial days of the year.

In the 8th, 9th and 10th columns, the winds, showing by their direction the same average weather, are classed together. In the 14th column, the additional weight of vapor required to saturate a cubic foot of air at the mean out-door temperature is given in grains. The 15th column shows the proportion per cent. of the 13th, to the sum of the 13th and 14th; or in other words, the ratio of the mean amount of vapor contained in a cubic foot of air, to the amount necessary for saturation at the mean temperature of that week, and is the expression generally used to indicate relative moisture; but it cannot throw much light upon the causation of disease at different seasons, for the reason that it relates merely to out-door temperature. The 16th column, believed to be a new feature in tables of this kind, will usually afford the information desired. To elucidate this, it is necessary, first, to give a description of what might be called model weather, viz., temperature 65° to 70°, dew-point 15° to 20° below; barometer, 30 in.; weight of vapor in cubic foot of air, 4½ to 5 grains; additional weight required to saturate, from 3 to 3½ grains; winds moderate, mostly westerly. A similar combination prevailed with the greater part of the weather for May and June, and during that time exercise in the open air, or in well-ventilated in-door apartments, or a sudden change from one to the other, would never cause disease; but, on the contrary, materially aid in its removal. On the other hand, let us cite the weather of the 6th week of 1855, which caused more disease than any other of this year.

For many hours of this week, the temperature was below 10°, and each cubic foot of out-door air only contained one half grain of vapor. This dry air was taken into our rooms, there heated to 70° or upwards, and thus its chemical affinity for moisture was increased more than 16 times —that is to say, the in-door air was 16 times drier than the out-door. This additional 8 grains of vapor the in-door air demanded, and preyed upon that contained in all the objects over which it circulated, our lungs and skin included, thereby causing disease *directly* to those who had vainly sought a tropical climate in heated and arid parlors, halls, or bed-rooms; and the alternate changes to those passing in and out of doors, of an eight-fold increase or decrease of temperature, and sixteen-fold dryness or moisture, were more than India-rubber skin, or mouth, nostrils, and throat, or any Ericsson wire gauze combination could well protect us against: whence congested mucous membranes, cracked and fissured skin, &c.

The 16th column may be made more useful by varying its heading thus: "the proportion per cent. of the natural moisture of the air to that of spring or summer in fine weather at 70°." A glance along the column will show by the highest numbers the healthiest weeks, and by the lowest, the most unhealthy. Thus 19 and 96 are the extremes.

The 28th column includes also the deaths of the natives of England, and the 29th those of the immigrants from Central Europe, in addition to Germany. A few words are necessary to show the reliable character of the returns of mortality. There is, probably, no other city or section of country in the world, containing a population of 800,000, where the returns of deaths are more carefully made. We are sure that all the deaths in the city at large, and in the institutions and islands connected, are reported punctually each week to Friday night, as also the date and locality of their interment. Thus, the reader may be assured that every item and figure is correct in the accompanying table, with the exception of those errors occasioned by careless or ignorant physicians, in reporting causes of deaths. That these form but a small portion, can be shown from the fact of the general consistency of our reports from any one disease found in monthly or yearly comparisons with tables elsewhere; besides which, about one fifth die in public institutions, treated by physicians whom we know are perfectly competent to report the causes of death.

Although the foregoing table, by its character and origination in a statistical association, mainly devoted to the systematic record of facts, mostly leaves the reader to form his own opinions upon it without a bias, yet a few additional leading arguments and conclusions may not be thought supererogatory.

1st. In our finest spring and autumn weather, partially described as that which the model week should be, with the observance of proper hygienic rules, and in good constitutions, *no natural sporadic causes of disease exist*, and the *most favorable juvantiæ for the sick are afforded.* 2nd. The low temperature of much of our winter weather is a *direct cause of disease.* Although the surface of the body can be protected, *nothing* can long *guard the air passages or the general system*, against exposure to extreme cold, or sudden changes from high to low temperatures, or vice versa. 3rd. The extremely small quantity of water contained in the air, in low temperatures, cannot often supply the necessary amount to the system either in or out of doors; but on the contrary, in a dry cold air, the inevitable rapidity of the currents *carries off the moisture from the mucous surfaces, &c.*, much faster than in summer, since the relative affinity 'cæteris paribus' of a still atmosphere for vapor is about the same out doors in any season. The preceding paragraph alludes to the *same cause of disease* as was noticed on a former page in describing the extremes of out-door air below 10°, and the same heated to upwards of 70°, when the exceedingly difficult matter of a sufficient supply of artificial moisture is not attained. 4th. For the *prevention or removal of disease* in our abodes, we must supply the proper equable moisture as well as warmth, and ventilation of a fine out-door tropical climate; to the completion of which end there can be no doubt that art might nearly approximate. 5th. More moisture than 4 or 5 grains to a cubic foot, or a much higher temperature than 70° is *unfavorable to health.* This, of course, is not established by the table, but it will probably be demonstrated in the next one published of the kind.

In conclusion, it is only necessary to state that the electrical condition of the air has been mostly *positive;* but the facts observed in its connection allow no definite inferences upon the subject in question. It is hoped that these few remarks will elicit further discussion upon these topics.

Abstract of the Report of the Committee of the Academy of Medicine on Catheterization of the Air-Passages.—This committee was appointed to report upon a paper read before the Academy of Medicine, by Dr. Horace Green, "*On the Employment of Injections into the Bronchial Tubes, and into Tubercular Cavities of the Lungs.*" The committee consisted of Prof. Willard Parker, *Chairman*, Drs. Alex. H. Stevens, Isaac Wood, J. Anderson, J. T. Metcalfe, B.

F. Barker, and John O. Stone. The following is an abstract of the majority report.

The committee met on five different occasions. At these different meetings 38 patients, in the aggregate, were submitted by Dr. Green and others to the test of the operation of passing instruments into the air-passages, and three, of the injection of nitrate of silver into these passages.

I. *As to the Practicability of the Operation of passing Instruments into the Air-Passages.*

This division of the Report was considered under the following heads:—

1. *History of Catheterism of the Air-Passages.*—The introduction of tubes into the air-passage is not a recent operation. It was recommended by Hippocrates, and seems to have been long practiced in preference to bronchotomy. Desault, among modern writers, also recommended it strongly. Mr. Ryland, in his treatise on *Diseases of the Larynx*, devotes a short section to this operation. Other authors allude to it as a matter of history.

2. *Results of Experiments.*—The results of experiments confirm the records of history, as to the practicability of the operation of catheterizing the air-passages. In 11 cases it was performed to their entire satisfaction. The evidences on which they rely as proofs of its success are:—

1. *The detection of the tube in the cavity of the larynx by the finger passed into the mouth.*—This was done by several of the committee, and was demonstrative of the position of the tube in relation to the laryngeal openings.

2. *The symptoms manifested by the patient.*

The symptoms which distinguish the passage of an instrument into the trachea and œsophagus, may be thus contrasted:—

TRACHEA.	ŒSOPHAGUS.
1. Suffusion of the face, rapidly increasing to turgescence and lividity.	1. Suffusion of the face slight, rapidly subsiding with cessation of retching and vomiting.
2. Great anxiety and alarm; not easily pacified.	2. Little anxiety; easily pacified.
3. Eyes wild, staring, overflowing with tears.	3. Eyes natural; slight suffusion from tears,
4. Cough violent and spasmodic.	4. Little or no cough.
5. Respiration greatly disturbed; inspiration loud, hoarse, and croupy; expiration attended with violent cough, ejection of bronchial mucus through the tube, and finally full breathing, through the instrument.	5. Respiration little, if at all disturbed; occasional puffs of air through the tube.
6. Voice extinguished, a hoarse whisper, interpreted with difficulty.	6. Voice distinct; often quite natural.
7. Retching slight.	7. Retching and vomiting a common symptom.

So prominent and characteristic are the symptoms which the patient manifests on the successful introduction of the instrument into the air-passages, and so strikingly do they contrast with those witnessed when it enters the œsophagus, that the committee came to regard the rational signs as the surest criterion of the success of the operation. In but a single instance did they fail of being exhibited with characteristic intensity. In this case the patient had suffered from a syphilitic ulceration of the air-passages, and to this circumstance, together with his enfeebled condition, was attributed the absence of the severe symptoms. Dyspnœa and lividity of the face were the only evidences of the success of the operation. They therefore establish it as a rule, to which ordinarily there is no exception, that the rational signs above tabulated will differentially distinguish the course which the instrument takes, whether into the laryngeal or œsophageal passages.

Other tests were employed, but none of them were found, on trial, free from objection.

The power of the patient to blow out a lighted candle, and to collapse and inflate, at will in respiration, a bladder attached to its free extremity through the tube, has been much relied upon as a proof that the tube had entered the trachea. But it was found that when the tube was purposely passed into the œsophagus, this power was still retained, though in a much less degree.

The passage of two sponge-armed probangs into the throat, and by the withdrawal of the lower one, calculating the position of the other, whether in the œsophagus or trachea, did not, as far as experimented with, yield satisfactory results. For it was not proved to the satisfaction of the committee that the sponge-probang entered the larynx and trachea.

The sensations of the patient are reliable only when the tube has been repeatedly passed both into the trachea and œsophagus. In these cases patients have very promptly and correctly decided which passage the instrument was entering. This fact was strikingly illustrated in Mary Norton, on whom the operation was repeatedly performed before she was brought before the committee. On the first and second trials of the introduction of the tube by Dr. Green, she shook her head, indicating that it had not entered the larynx. The operator, however, was satisfied on the last trial that the tube had penetrated the trachea, and that the sensations of the patient were not to be relied on, when she ejected a portion of the contents of the stomach through the tube, and thus demonstrated not only the position of the instrument, but equally the correctness of her sensation.

It appeared very evident also, in the course of these experiments, that the opinion of the operator, as to the course which the instrument takes, is unreliable, when he trusts to his own senses, and disregards symptoms. They witnessed in two cases the fallacy of Dr. Green's opinion, as to the success of his experiment, though based upon so large an experience. In both instances, while positive that he had successfully passed the instrument into the trachea, the patient vomited through the tube, and thus demonstrated his error.

II. *Facility of the Operation.*—While these experiments proved conclusively to the minds of the committee, the practicability of passing tubes into the air-passages, they also afforded opportunities of witnessing the facility with which the operation is performed under different circumstances, and with different instruments. These were as follows :—

1. *Previous Preparation of the Patient.*—It is contended that the facility with which the instrument is introduced depends much upon the previous preparation of the patient, by frequent application of the nitrate of silver to the upper part of the larynx. To obviate this objection, the Committee met twice at Dr. Green's office to witness the experiment upon patients whom he was treating with local applications to these parts, and at the second visit at Bellevue Hospital, the patients were selected from a class which had been expressly prepared for the experiment, by the application of caustic to the throat from three to five times during the preceding week.

The results of these experiments, however, do not sustain the above assertion. The patients on whom Dr. Green had been operating for six months, more or less, were as intolerant of the actual passage of the tube into the trachea as those first submitted to trial. The case of Mary Norton was adduced. Although the tube in her case had been passed into the trachea half-a-dozen times previously to her coming before the Committee, still she exhibited in the most marked manner all the evidences characteristic of the introduction of a foreign body into the air-passages, when the tube was successfully passed.

2. *Instruments Employed.*—The facility with which catheterism of the air-passages is performed seems to depend in a great degree upon the instruments used. Those employed in these experiments were: 1. A tube, consisting of Hutching's catheter No. 10, with a wire stilet, and bent with a curvature corresponding to a circle of six inches in diameter. 2. A tube of the same size, slightly bent at its extremity. This was the instrument selected by Dr. Green, and is the one which he is accustomed to use in practice. 3. A sponge-armed probang, the sponge having a diameter of one half to three quarters of an inch. The result of the experiments with these several instruments was as follows :—

	No. of trials.	*Failed.*	*Succeeded.*	*Per cent. Failures.*
Tube with large curve,	19	8	11	about 28
Tube with small curve,	37	34	3	" 92
Sponge probang,	18	18	0	100

From these experiments it appears that the instrument best adapted to succeed in catheterism of the air-passages, is a tube having a large curve, or one shaped like a common catheter; while that least adapted to enter the trachea is the sponge-armed probang.

1. *The Tube with a Large Curve.*—This instrument was introduced into the trachea eleven times to the entire satisfaction of the Committee. The fact that the operators were successful eleven times in nineteen trials proves that this tube can be introduced with considerable certainty into the air-passage.

2. *The Tube with the Small Curve.*—This is the instrument selected by Dr. Green for catheterization of the air-passages, and is that which he uses in practice. In these experiments he was the only one

who employed it, and the result shows that even in the hands of the most skillful practitioner, it failed of entering the air-passages in about 92 per cent. of trials.

3. *The Sponge-Probang.*—This instrument afforded the least satisfactory results of any used. Notwithstanding the most persevering efforts with the whalebone slightly bent, as used by Dr. Green, and with patients who quietly submitted to the test of experiment, the results were entirely negative. In no instance did it satisfactorily enter the trachea. In two instances, with the whalebone curved like a common catheter, the sponge was thought to have entered the larynx; but with repeated efforts it could not be passed between and beyond the vocal chords. The suffocation was so great each time as to compel a withdrawal of the instrument.

III. *The Utility of Injections into Tubercular Cavities of the Lungs.*—This portion of the report was brief. As the Committee had no evidence that injections could be thrown into tubercular cavities of the lungs, they refused to discuss, on merely theoretical grounds, the question of their utility. One of the three cases injected with nitrate of silver died within twenty-four hours after the operation, not having recovered from its immediate effects. A letter was read from the physician who made the autopsy, describing the condition of the air-passages. The mucous membrane had the appearance of a recent application of the caustic.

Conclusions.—1. Catheterism of the air-passages dates its history from the time of Hippocrates.

2. The best evidences of the successful passage of an instrument into the air-passages, are the rational signs.

3. The facility of the operation depends upon the kind of instrument used—the tube having a large curve being best, and the sponge-probang least adapted to enter the trachea.

4. That there is no reliable evidence, in the opinion of the Committee, that the sponge-probang has been passed through and beyond the vocal chords.

5. That there is no sure evidence that an instrument can be passed *at will* into the right or left bronchial divisions.

6. That in the great majority of instances where injections are supposed to have been thrown into the lungs through a tube, they have passed directly into the stomach.

7. That as regards the utility of injections of nitrate of silver into the lungs, the facts thus far developed in the experiment of the Committee, lead them to regard the operation as one fraught with danger as well as difficult.

This report was signed by Prof. Parker, Chairman, Drs. Wood, Metcalf, and Stone; Dr. Anderson subscribed to all but that bearing upon the utility of injections; this he did not think sufficiently investigated; Dr. Stevens, who witnessed but a few experiments, made a short report. Prof. Barker made a lengthy minority report.

PRACTICAL MEDICINE.

Quinoidine in the Treatment of Intermittent Fever. By J. Da Costa, M.D., of Philadelphia.—"Quiniodine sufficiently pure for medicinal purposes, is prepared in this city by several eminent chemists, (especially, we believe, by Messrs. Powers & Weightman,) by precipitation, by means of alkalies, from the acidulous solution of the residue left after the crystallization of the sulphate of quinia. The precipitate thus formed is dissolved in alcohol, and from this solution, subsequently, the quinoidine is obtained. The amount of this alkaloid furnished by different barks varies. Thus, the red bark, which contains less quinia than the Calisaya, yields a larger amount of quinoidine. Mr. Weightman recently informed the writer that the ordinary Calisaya bark furnishes, in proportion to every 100 parts of quinia, only about 10 to 20 of quinoidine, while the New Grenada barks yield in proportion to the quinine they contain, about 40 per cent. of the quinoidine.

Quinoidine, when pure, is soluble in alcohol and sulphuric acid, from which it may again be precipitated without loss of weight. Its color is that of an ordinary extract; it is almost entirely devoid of taste. It has been occasionally medicinally employed, especially in some parts of Continental Europe, and enjoyed a high reputation as an antiperiodic in an epidemic that occurred near Berlin.

The patients for whom quinoidine was prescribed, were mostly Irish of the lower classes, who applied for advice to the Moyamensing House of Industry. In many, the intermittent fever had lasted for some length of time; it was mostly of the quotidian type. No cathartic was ordered previous to the administration of the medicine, which was given in pills of two grains each, or else dissolved in dilute aromatic sulphuric acid. The average dose required to arrest the chill in an adult seemed to be about 20 grains, six grains of which were, as a general rule, ordered shortly before the expected paroxysm, while the rest was taken during the intermission. If the bowels were constipated, a little of the extract of colycinth was with advantage joined to the quinoidine. After the chills were checked, the remedy was in some cases continued, in smaller doses; yet as patients, when relieved, are not always willing to return to a public institution, it was sometimes impossible to persevere with the treatment, and the disease then generally reappeared after the lapse of a week or two.

Of the 53 cases cited, in many of whom the disease was of long standing, the chills were arrested in 49 cases by the first administration of the medicine; only 4 required a repetition of the dose. In 10 cases the disease returned, which, although it may seem a large proportion of relapses, is not in reality so, when we consider the well known tendency of intermittent fever to return, and the fact that, in many of the cases, no medicine, for reasons above stated, was given after the first arrest of the chill. In conclusion, the writer can state as his honest belief, that quinoidine possesses antiperiodic qualities which, if not superior, are certainly not inferior to the sulphate of quinia or cinchonia, whilst he thinks it preferable to these, from the absence of bitter taste, from its being less liable to affect the head or the stomach of the patient, and from its comparatively low price.*—*Med. Examiner.*

Fluid Extract of Scutellaria. By JOSEPH BATES, M.D.—"Lately I have used Tilden's fluid extract of scutellaria with signal success, in the treatment of diseases attended with nervous hesitation and irritability, restlessness, &c. In the treatment of children, it is invaluable for allaying these symptoms. The dose is a teaspoonful, repeated as often as the circumstances or indications require. It may be relied upon in some forms of hysteria. Patients convalescing from typhoid fevers, pneumonitis, arthritis, &c., or any disease with those symptoms, will be shortly relieved by one or two teaspoonsful of this preparation. I have no hesitation in saying that those who give it a fair trial will find it efficient in the treatment of many diseases for the relief of which small doses of opium are frequently given, without any of its unpleasant sequences."—*Boston Med. & Surg. Journal.*

Extractum Sumbul Fluidum (*Musk-root*). By Prof. WILLIAM PROCTER, Jr.—Within a few months past several physicians of Philadelphia have prescribed a fluid extract of sumbul, (musk-root) which is stated by Mr. Simes to be of the strength of a grain to the minim. As musk-root is analogous in its therapeutic properties to valerian, the following recipe has been made to correspond in strength with the officinal fluid extract of valerian for this reason, as well as because its peculiar constitution seems to require more menstruum than the proportion stated by Mr. Simes.

Take of Musk-root,	four ounces (troy)
Ether,	four fluid ounces.

Alcohol and water, of each, q. s.

Bruise the musk-root, moistened with a little alcohol, until reduced to a coarse powder; mix the ether with twice its volume of alcohol, pour it on the musk-root, macerate in a covered vessel, for 24 hours, and introduce the mixture into a suitable percolator. The absorbed tincture (which has a light brown color) is displaced slowly by alcohol (sp. gr. 835) until twelve fluid ounces are obtained, when the process is continued with a mixture of alcohol and water (equal parts) until a pint has passed. Water is then poured on the residue until a pint of liquid has filtered. The ethereo-alcoholic tincture is suffered to evaporate in a warm place until reduced to two fluid ounces; the hydro-alcoholic tincture is concentrated on a water bath to the same bulk; and the watery infusion evaporated to one fluid ounce. The two last liquids are now mixed, three fluid ounces of pure alcohol added to the first (ethereal) liquid to dissolve the oleo-resin, and the other mixture added gradually with agitation, so that the whole shall measure eight fluid ounces, the mixture being afterwards shaken occasionally for 24 hours. A portion of oleo-resin and some gummy extractive remain undissolved, and must either be removed by filtration or left as a sediment

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*About one seventh of the price of the sulphate of quinia.

When the ethereo-alcoholic tincture is evaporated to one sixth, nearly all the oleo-resin separates, and hence the necessity of redissolving this by alcohol before adding the other liquids.

The dose of this fluid extract is from 15 minims to a fluid drachm. The properties of the preparation are analogous to those of valerian, and are used in hysteria, dysmennorhœa, and other nervous disorders, and Dr. Wood informs us that it is highly valued in Moscow as a remedy in delirium tremens.—*American Journal of Pharmacy.*

SURGERY.

Gunshot-wound of the Neck.—Ligature of the Common Carotid Artery.—Recovery. By C. E. Isaacs, M.D., of New York.—"About the middle of last January I was requested to meet Professor Willard Parker, in consultation upon the case of a man who had been admitted into the Hospital on Blackwell's Island, with a severe *gun-shot wound.* On inquiring into the circumstances, we ascertained that, sixteen days previously, the patient had attempted to destroy himself by placing the muzzle of a pistol, loaded with a conical ball, near to the angle of the jaw, and then discharging it. The ball entered about an inch below the angle of the jaw, producing a moderately-sized external wound, but tearing the parts within extensively. The hemorrhage, which was profuse, was restrained at the time by compresses, bandage &c., &c., but continued to recur at intervals of two or three days, up to the period at which we were called in to see him. On removing the dressings, a small quantity of dark blood, mixed with semi-purulent matter, issued from the wound. From the appearance of the parts and that of the discharge, and in consideration of the great space of time which had elapsed since the occurrence of the injury, we hoped to control any future hemorrhage without the necessity of resorting to an operation; we therefore directed the compression to be kept up as before, and the patient to be carefully watched, &c., &c, However, on the next day the hemorrhage recurred in such a furious manner as to render it evident that some operation was now required to save the life of the patient, who was much enfeebled by the loss of blood.

"With the kind assistance of Dr. Parker, I then proceeded to ligature the carotid just below the point where it is crossed by the omo-hyoid muscle. I then dilated the wound by cutting outwards as far as the edge of the sterno-mastoid, upwards and inwards towards the lower border of the inferior maxillary bone, and downwards so as to reach the incision previously made for the carotid. Turning out the coagula rapidly with the finger, the hemorrhage became very profuse. Sponges were pressed into the wound, so as to arrest the bleeding, aided in some degree by firm pressure on the sides of the wound by the fingers of the assistants. The most accessible vessels were first secured; then, by gradually withdrawing one sponge after another, others were tied, and so on, till nearly the whole of the hemorrhage was arrested. The finger could now pass in the track of the ball, through the base of the tongue, so as to reach the region of the arteries of the external carotid of the *opposite* side, which had been wounded by the ball, and were now pouring out blood, but in small quantity. As these were at such distance from the surface, and situated, as it were, at the apex of a deep conical cavity, they could not be fairly seen, or reached by a ligature. Compression was therefore relied on for the arrest of blood from this source. Careful and cautious research failed to detect the ball, which had not passed out of the body. The parts were now brought together by sutures, adhesive strips, &c., and moderate compression was made on the wound. The patient was carefully watched, but the bleeding did not recur. The wound healed rapidly, and without interruption, and at the end of a few weeks he was discharged from the Hospital, cured."—*New York Med. Times.*

Fracture of the Os Hyoides. By Prof. T. Wood, M.D.—Through the kindness of our friend, Dr. P. G. Fore, of this city, we were invited to examine a case of fracture of the *os hyoides*, that had occurred about one week before we saw it, in one of his patients. The patient was a female, about thirty years of age, who had fallen down the cellar steps, striking the prominent part of the larynx and hyoid against a projecting brick, severely injuring the larynx as well as fracturing the bone. The fracture was on the left side, and near the junction of the great *cornu* with the body of the bone. Crepitation was distinctly felt, on pressing the bone between the thumb and finger ; or, when the patient would swallow ; though, at this time, the severe symptoms that followed the accident, and continued several days, had somewhat subsided.

Immediately after the accident, there was profuse bleeding from the fauces, and she experienced great difficulty and pain in the act of swallowing, and the power of speech was almost entirely lost. On attempting to depress or protrude the tongue, she felt distressing symptoms of suffocation. Considerable inflammation and swelling of the throat and larynx ensued, and continued in some degree up to the time of our visit.

To-day (about four weeks since the accident), Dr. F. informs us, that the patient has so far recovered as to be able to converse, though the voice is somewhat impaired. She is yet unable to swallow solid food, and is wholly sustained by fluids.—*Western Lancet.*

Strangulated Femoral Hernia containing Ovary and Fallopian Tube.—The following are the principal facts of a case of femoral hernia related by Prof. Parker in the *N. Y. Med. Times.* Miss F., æt. 69, had for many years a reducible hernia on the right side. When called to see her she had been suffering three days; the tumor was hard, of the size of an English walnut, tender at its neck, and situated under Poupart's ligament. The taxis having failed, chloroform was administered, and the operation commenced. The intestine was returned without much difficulty, but on removing a mass of dark, shreddy and vascular substance remaining, a ligature had to be applied, which brought into view an ovary. The whole was therefore returned, the wound closed, and morphine freely given; the patient recovered. Another case is referred to in the *Gaz. Méd.* in which the cæsarian section was performed upon the uterus occupying a hernial sac. The patient was æt. 44, had seven children, had long suffered from inguinal hernia; at the sixth month of her eighth pregnancy it became strangulated, but was reduced. It soon returned, and she went her full term; labor began, the os dilated and the waters escaped by the vagina; the tumor was twenty-five inches in circumference and twenty-three in length. The sac and uterine wall were then laid open, and a well-formed living infant removed; patient died on the third day. Velpeau mentions a case in which the uterus at term occupied a femoral hernia, and was spontaneously delivered; in a case related by Frank the uterus protruded through the linea alba, and Flament cites a case complicating umbilical hernia.

Foreign Bodies in the Air Passages. By Prof. JOHN M. WATSON, M.D., of Nashville, Tennessee.—In the *Nashville Journal of Medicine and Surgery* we find the instructive particulars of eight cases of this accident. Three of the cases, with the general remarks which follow, we copy:—

A clever little boy, about 10 years old, the son of Mr. Paul Johns, of Rutherford Co., inhaled a large grain of corn into his windpipe, in the year 1848. I saw him the following day in consultation with several very intelligent physicians. We all concurred heartily in the propriety of tracheotomy. I opened the trachea; some hemorrhage and coughing followed, his face became livid, he gasped for breath, and appeared to be in great danger of suffocation. Some of the physicians cried out that he was dying from internal hemorrhage; fearing that the trachea was not well opened, I enlarged the primary incision, and the grain of corn was then seen protruding slowly through the wound, and was promptly detached. All the symptoms of suffocation subsided immediately, showing that hemorrhage had nothing to do with the urgency of the previous symptoms. The wound was dressed as in the other cases. The patient had no bad symptoms afterwards, and rapidly recovered.

This case occurred in the month of August, 1852, near Nolensville, Tennessee. The little patient, a son of Esq. Edmonson, was about 7 years old. He inhaled a watermelon seed into his windpipe. I saw him in consultation with Dr. James Scales, and we agreed upon the operation of tracheotomy for his relief. I opened the trachea; but little hemorrhage followed. Moderate coughing followed, and in the course of ten or fifteen minutes the seed was ejected through the opening. He recovered without any bad symptoms.

Case of Spontaneous Expulsion of a cockle-bur from the trachea of a little boy six or seven years old, the son of Mr. Cofield Seward, of Rutherford county. I was called to see the child, expecting to perform the operation of tracheotomy for the removal of the bur, but was agreeably disappointed by its spontaneous expulsion. The rough, prickly covering of the bur was thoroughly macerated and rendered as soft and supple as a piece of cotton thread, by the fluids of the windpipe.

I think tracheotomy a safer operation for the removal of a foreign substance from the respiratory tube, than laryngotomy, although the former is more difficult to perform. The crico-thyroid membrane will not admit of an opening sufficiently large for the expulsion of a water-melon seed, grain of corn, or common bean, the articles most commonly drawn into the air passages. I do not think that tracheotomy, when properly performed, in a normal state of the vessels involved in the operation, should ever give rise to dangerous and alarming hemorrhage. Moreover, any of the vessels may be easily ligated, if necessary.

Sutures should never be employed in order to close the wound; nor should the wound be closed by adhesive strips; it is best in all cases to leave it open, and protect it against the inhalation of extraneous substances, either by a piece of gauze or an adhesive strip, applied for that purpose. More or less tumefaction and infiltration around the wound must of course ensue, which would compress the trachea in front, being greatly weakened at that point by the opening in it. The danger of infiltration of blood and serum between the respiratory tube and its investing tissues, would, by an early and perfect closure of the wound, be greatly augmented.

On Chloride of Zinc as a Caustic in Chancre. By James H. Conway, M.D., of Richmond, Va.—For several years I have been in the habit of using the chloride of zinc as a caustic to chancres, to the exclusion of all other agents of the kind; and although I do not claim originality in the use of a remedy so well known to the profession, yet its application was first suggested in the fall of 1852, by a case of most obstinate chancre, in which it proved so efficient a remedy that I determined to try its effects in cases which would probably yield to the caustic usually employed and highly extolled by Ricord—namely, the nitrate of silver.

In the case alluded to, the chancre was situated immediately behind and below the glans penis, nearly perforating the frænum, and so deep as to cause the apprehension that the urethra would be finally opened, and hypospadias established. After trying a variety of caustics, I finally determined to resort to the chloride of zinc, which was applied but once, and, in a few days, followed by complete cicatrization of the ulcer. Since then I do not think that I have used any other agent, except in two instances. In the first, I employed the nitrate of silver and afterwards the chloride of zinc, for the purpose of ascertaining the relative amount of pain produced by either, and the patient declared that the latter was the less painful. Certain it is, that the aggregate amount of pain is less from the chloride of zinc, as it is rarely necessary to apply it oftener than once, whereas the lunar caustic, however freely you may use it, generally requires repetition.

The manner in which I apply it, is by making a saturated solution, or, as it is exceedingly deliquescent, by exposing a small quantity to the air it becomes dissolved, and then, by means of pieces of paper twisted to a point and filled with the solution, the chancre being carefully wiped dry, it is applied, and again wiped to prevent it spreading. The application is repeated, until a white eschar is formed, and then dressed with dry lint. If, however, I think it has been too freely used, I mop or swab the part with water, which readily dissolves the superfluous quantity applied.

I should scarcely think my experience in the use of this agent worthy of record, were I not fully convinced of its utility. Believing the first indication in the treatment of syphilis to be the destruction of the chancre, the source of the poison to the general system, I do most cordially recommend it as the best preventive of constitutional syphilis, even in many respects superior to the knife.—*Virginia Med. and Surg. Jour. for June: p.* 473.

Remarks on Fractures.—At the late Annual Meeting of the *American Medical Association,* as will be seen by reference to the Proceedings published in this number, Dr. Hamilton submitted "*a Report on Deformities after Fractures*" pending which Prof. Hamilton made the following remarks, which we copy from the *Buffalo Med. Journ.*—"Dr. Hamilton said he had a word to say which did not belong to the report. Prosecutions for mal-practice have become so frequent that surgeons were alarmed, and not a few were abandoning the profession or refusing altogether to undertake the treatment of grave surgical accidents, and especially of fractures. So frequent were these prosecutions that members were no longer surprised at such statements. If they had heard the speaker say that lawyers were abandoning their profession from this cause, they would have been startled, but to us the fact is familiar.

It is proper for us, then, to interrogate ourselves. Why is it that we are held to an accountability so much more strict than any other professional men, or than any other artisans? Is it because there are jealous and designing men in our own ranks, who instigate these suits? No doubt, such men may be found, but only as an exception. The fact is, that surgeons have sometimes been mulcted in damages simply because the jury believed, from the united character of the medical testimony, that it was a conspiracy, and the more conclusive the testimony, the more certain, with some jurors, is the defendant to suffer.

Is it chargeable to the members of another profession—to the lawyers? There may be some men in the profession of law, also, who, driven by the sheer necessity of their circumstances—by their extreme poverty, or who, without any such apology, with only loose notions of right and wrong, encourage and undertake such suits—such are the men who hang about the Tombs of New York, and who may be found, more or less, in every town—but the speaker has reason to believe that honorable and intelligent lawyers seldom countenance these prosecutions. That eminent jurist of the State of New York, Joshua Spencer, has told Dr. Hamilton, that for himself he does not think that he ever commenced a suit of this character, although he has been frequently retained as counsel, and he believes his brethren, generally, look upon these complaints with suspicion and refuse to meddle with them.

Where, then, must we look for an answer to the question, why are these prosecutions against surgeons so frequent? Let the gentlemen be assured, the causes are to be found in the *very imperfections of our art, and in our own unwillingness to admit these imperfections.* Surgeons have claimed too much, and it cannot certainly be expected that the world will demand of them less than they claim for themselves. Again and again surgeons have said that a fracture of the femur might be generally made to unite without any shortening, while the fact is not so. Malgaigne, who is eminently an honest man, says, to make this bone unite in an adult person, where the fracture is sufficiently oblique to prevent the ends from supporting each other, is "simply impossible" (*simplement impossible*).

Let the profession be wiser in the future and acknowledge that they cannot perform impossibilities.

Amputation of the Thigh in Civil and Military Practice.—The Comparative Success of Secondary Amputations. By Richard McSherry, M.D., of Baltimore.—The great fatality which attends upon amputation of the thigh after gun shot wounds is evidenced by the fact, that, during the campaign in Mexico, under Gen. Scott, there were no recoveries, so far as Dr. McSherry could learn, after the operation. This mortality is not peculiar to our country, as Mr. Ribes examined four thousand invalid soldiers, among all of whom he did not find one single instance of injury of the femur by shot, nor one who had undergone amputation of the thigh. Malgaigne was equally unfortunate with all his cases during the Polish campaign. In civil life, the case is widely different. The statistical tables, published by Dr. Norris, state that during a period of ten years, of sixteen amputations of the thigh, performed in the Pennsylvania Hospital, fourteen recovered, and but two died. The two fatal cases were primary amputations, after fracture of the thigh and compound and comminuted fracture of the leg, respectively. Of the fourteen successful cases, seven were fractures (one ununited fracture of thigh), one tumor on the knee, and six caries of knee-joint. These results are favorable, Dr. McS. thinks, to secondary amputations.

In the Parisian hospitals, there were, in ten years, forty-four amputations of the thigh. Of these, thirty-four died, and ten recovered. All of these, however, were amputations after *traumatic* lesions. A comparison of these results exhibits, Dr. McSherry observes, that patients who undergo great operations, in full robust health, are more liable to perish than those who are subjected to them for chronic disease. There is abundant proof, also, that delay *is* advantageous. Dupuytren, in 1830, treated fourteen cases of fracture of the thigh *without* amputation; of these six recovered and eight died. Malgaigne reports five cases treated by himself, *without* amputation, of whom two recovered and three died. These results, compared with those in the same hospitals after amputation (see ante), show that the chances of life were greatest where the operation was not only deferred, but foregone altogether. Dr. McSherry considers that these facts show that the rule that the thigh must be amputated immediately upon fracture of the femur by shot, is a bad one, inasmuch as it requires certain destruction of the limb, without adding appreciably to the chances of ultimate recovery. When there is thorough disorganization of the limb from injury, the case, of course, is different. The *exception*, however, should not be made the *rule.—American Jour. of Med. Science.*

Remarks on Acute Glossitis. By. ISRAEL MOSES, M.D., Assistant Surgeon U. S. A.—In the *Medical Times*, for June, Dr. Moses reports four cases of this affection. Upon these cases, he makes the following remarks :—It will be seen from the above history, that glossitis usually commences with the ordinary symptoms of an inflammatory disease—with pain and rapid tumefaction of the tongue, difficult deglutition, great dyspnœa, and soon followed, if no relief be afforded, by all the symptoms of congestion of the brain and lungs. The tongue, at first red, soon becomes dry and thickly coated with yellow, rapidly increases in size, so as to occupy the entire cavity of the mouth, and even protrude between the teeth, making it impossible for the patient to articulate, or swallow. There is a constant flow of saliva from the mouth. The progress of glossitis is generally rapid, occupying from twelve hours to five or six days, and terminates either in death, resolution, abscess, or gangrene, all which terminations are seen in the history of our four cases. So rapid a termination as in the one fatal case, is a very rare occurrence, and only happens in constitutions broken down, by intemperance or disease. The *treatment* of the disease in a healthy subject is simple, and the remedies must be early and actively employed. General and local depletion carried to a considerable extent, with free purgation, nauseating doses of tart. ant., with hot baths, complete the round of treatment. Two or three deep incisions into the tongue from the base to its apex, is the best mode of local depletion; care being taken to avoid the ranine arteries. M. de la Malle, in the Mem. de l'Acad. de Chirurgie, gives several instances of the advantage of incisions; and Camerarius has recorded a case, in which the patient was rescued from impending death by this operation.

Job. a Meckœn, a Dutch surgeon, who lived in the sixteenth century, adopted this practice on several occasions with the most complete success; and occasional cases of the success of this treatment are scattered through the European journals. In broken-down constitutions, like that of case IV., remedies must be used with caution, though rarely attended with success; the disease rapidly terminating in gangrene, and death. The operation of tracheotomy is occasionally required where the respiration becomes extremely difficult, and has been performed with success in a case recorded by Mr. Bell. The above case was published some years ago; and I proposed making more extended remarks upon the disease, but I find I have already perhaps exceeded the limits which I might expect to be accorded in your journal.

MISCELLANEA.

A New German Medical Society.—We are pleased to learn that a new German Medical and Surgical Society has been organized at the University Medical College, in this city, for the purpose of cultivating medical science, and promoting the interest of the profession at large.

The utility of such associations in exciting a more general interest, and in enlisting individual enterprise for the advancement of science, needs no comment; and it is quite natural that the German practitioners amongst us should avail themselves of the advantages of scientific co-operation. There are also specific reasons for the organization of such Societies,—the difference of the languages which prevents many German physicians from realizing the full benefit of similar American Medical Societies. Again, it enables them to remain in constant connection and acquaintance with their own medical literature, which we consider most laudable. The present number of its members is about forty, with the prospect of rapid increase. Its constitution is framed on a most liberal basis, scientific qualifications and moral integrity being the only requirements for obtaining membership. In reference to its internal organization, the English plan has been preferred, so as to lay all minor business into the hands of Committees, leaving the time for scientific transactions unimpaired.

In order to encourage scientific research, the Society offers to publish, at its own expense, all papers read, provided the scientific committee has deemed it qualified for that distinction. The following is the list of officers :—

President, Dr. Schermer ; Vice-President, Dr. Tellkampf ; First Secretary, Dr. Kammerer ; Second Secretary, Dr. Jacobs ; Treasurer, Dr Brunninghauser.

The Jews' Hospital. — A new hospital has been added to the list of *Institutions* already in existence in this city ; we refer to the *Jews' Hospital*, so called—having been planned and erected by the munificence and voluntary contributions of members of the Hebrew faith. The hospital is situated in 28th street, between 7th and 8th Avs., and can accommodate from 100 to 150 patients. It is built with all modern improvements, being excellently ventilated,—with high rooms —hot air furnaces, and every convenience in the way of water and closet accommodations desirable. The house was opened on the 5th of June, for the reception of patients, and numerous applications have already been made. The following is the Medical Staff:

Resident and Attending Physician: Dr. Mark Blumenthal ;

Attending Surgeons: Drs. Israel Moses, Th. P. Markoe and Alex. B. Mott;

Consulting Physicians: Drs. C. R. Gilman, W. Detmold, Wm. B. McCready, and W. Maxwell ;

Consulting Surgeons: Drs. Valentine Mott, Willard Parker.

Asylum for Inebriates.—The Commissioners appointed by the Legislature of the State of New York to organize this institution and receive subscriptions to its capital stock, thus state the object of this enterprise in a recent report:—"The object of this institution is to provide an asylum for the poor and destitute inebriate, where his physical and moral condition will be alike the care of the physician and the philanthropist, and where his labor may be rendered productive and of service to his family. With the asylum there will be connected work shops, in which each patient, as soon as his condition will permit, will be regularly employed—thus making the asylum a self-supporting institution. It will be seen that the community will thus be relieved of the burden of maintaining inebriates in almshouses and prisons; who will be separated from the society of those incarcerated for public crimes, and placed where their inebriety will be treated as a *disease*, and where no efforts will be wanting to produce in them a thorough reformation; and where an income from their labor will be secured to their families, who otherwise would be left to penury and suffering. To carry out successfully the great aim of the institution, $50,000 must be raised; this being the amount of Capital Stock required by the charter. This amount, which can be increased when necessary, is divided into shares of $10 each. Any person wishing to subscribe to the Capital Stock, can send his name with the amount he will take to any one of the Directors."

The Directors design to lease a building temporarily and enter at once upon the work for which the Charter was granted. We regard this undertaking as one of the most benevolent of the age, and it is gratifying to see it patronized by the State.

Women's Hospital in New York.—Since our last issue this charitable institution has been publicly inaugurated. The special object of this charity is to afford accommodation and treatment for a class of poor women not otherwise provided for in our city. The list of officers and managers of this Hospital embraces the names of some of the most prominent among the benevolent, enterprising, and respectable ladies of our city. The medical board of the institution consists of the following: J. MARION SIMS, M.D., *Attending Surgeon;* ALEXANDER H. STEVENS, M.D., VALENTINE MOTT, M.D., *Consulting Surgeons;* EDWARD DELAFIELD, M.D., JOHN W. FRANCIS, M.D., *Consulting Physicians.*

Marine Hospital. — ELISHA HARRIS, M.D., of this city, entered upon his duties as Physician-in-Chief to this important hospital, on the 28th of June, by appointment of the Governor and Senate of the State. Dr. Harris is well known to our readers, by his contributions to the pages of this Journal, as an able scientific and practical writer. His appointment, based upon professional merit, reflects creditably upon the State Administration.

Ohio State Medical Society—Patents.—At the last Annual Meeting of this Society, held at Zanesville on the 5th, 6th, and 7th ultimo, the Society very promptly, and with much unanimity, repealed the resolution offered by Dr. Grant at its annual session in 1854. As the knowledge of the passage of the resolution has passed far beyond the local bounds of the Society, we subjoin the resolution rescinding the same, prefacing them only with the remark, that our readers and the profession generally will rejoice with this demonstration of the fact, that there is sufficient conservatism in its ranks to stay the truant wanderings of *young physic.* The following are the resolutions:

Resolved, That the resolution offered by Dr. Grant, (a member of this Society, and not at this, or at that time, a practitioner of medicine,) at the last session of this Society, which says, "that it is not derogatory to medical dignity, or inconsistent with medical honor, for medical gentlemen to take out a patent right for surgical or medical instruments," was offered at a time when many members of the Society had left for their homes, and was not, therefore, the sense of this Society.

Resolved, also, That said resolution is in direct opposition to the code of Medical Ethics adopted by the Society, and, therefore, be it further

Resolved, That said resolution offered by Dr. Grant, and adopted by this Society be, and is hereby, rescinded.

College of Physicians and Surgeons.—We are gratified to learn that this College have purchased an eligible site for a new edifice, at the corner of Fourth avenue and Twenty-third street. The building is to be a model of its kind, and will be ready for occupation at the usual season of commencing the winter course of lectures.

TO READERS AND CORRESPONDENTS.

☞ We are under obligations to Prof. F. H. Hamilton, of Buffalo, N. Y., for the privilege of presenting our readers with the Monograph of Mr. Amussat, of Paris, *On the Treatment of Hemorrhoids*, illustrated by the original French plates. The Monograph and stereotyped plates were transmitted to Prof. Hamilton on account of his excellent translation two or three years since of Amussat's work on *Water in Surgery.*

☞ We are compelled to lay over several original communications, a review of Meigs and Holmes' works on puerperal fever, bibliographical notices, &c., &c.

SEPTEMBER, 1855.

MEDICAL JOURNAL ADVERTISER.

TERMS FOR ADVERTISING.—*Ten dollars per page. Medical Circulars, and Catalogues of Medical Books, stitched in on reasonable terms.*

College of Physicians and Surgeons,

NEW YORK.

FORTY-NINTH SESSION, 1855—56.

THE Lectures will commence on Tuesday, October 16th, and continue until March 15th, 1856.

FACULTY.

ALEX. H. STEVENS, M.D., LL.D., President, and Emeritus Professor of Surgery.
JOSEPH M. SMITH, M.D., Professor of Materia Medica and Clinical Medicine.
JOHN TORREY, M.D., LL.D., Professor of Chemistry and Botany.
ROBT. WATTS, M.D., Professor of Anatomy.
WILLARD PARKER, M.D., Professor of Surgery.
CHANDLER R. GILMAN, M.D., Professor of Obstetrics.
ALONZO CLARK, M.D., Professor of Pathology and Practical Medicine.
ELISHA BARTLETT, M.D., Emeritus Professor of Materia Medica.
JOHN C. DALTON, JR., M.D., Professor of Physiology and Microscopic Anatomy.
LEWIS A. SAYRE, M.D., Prosector of Surgery.
GEO. T. ELLIOT, M.D., Assistant to the Professor of Obstetrics.
JOHN A. LIDELL, M.D., Demonstrator.

FEES.—For a full course $105. Matriculation fee $5. Graduation fee $25.

PRELIMINARY COURSE.—This course will commence on Sept. 25th, and continue until Oct. 16th. Lectures free to the matriculated students of the College.

NEW BUILDING.—The Trustees have purchased a lot in the vicinity of Bellevue Hospital, on which they are now erecting a College edifice, 65 ft. by 100, which will, they hope, equal if not surpass any building in the country. It will contain lecture-rooms of the largest size and most approved construction, a well lighted and thoroughly ventilated dissecting-room 20 by 75 ft., with every other requisite for comfort and convenience. The building will be inaugurated with appropriate ceremonies on Nov. 5th, 1855.

Clinical instruction will be given at the N. Y. Hospital by Prof. Smith, and at Bellevue Hospital by Prof. Clark.

ROBT. WATTS, M.D.
Dean of the Faculty.

College of Physicians and Surgeons,
67 Crosby-st., N. Y.

TO THE MEDICAL PROFESSION.

The attention of the medical profession is respectfully invited to the various appliances, kept and made to order by the undersigned, for the relief of all physical weaknesses and deformities requiring mechanical support.

The "radical case truss," invented by Mr. S. H. Marsh, and which received the only prize medal awarded for Trusses at the Crystal Palace, in 1854, is constructed upon a new principle and in such a manner as that adhesive inflammation in the openings through which the viscera escape, invariably follows its application, and its success thus far, in cases of hernia, is such that its superiority over all other trusses is believed to be fully demonstrated.

We also keep trusses of every other description, together with surgical bandages and splints—apparatus for curvation of the spine—bow-legs—club-feet, etc. Also elastic stockings, knee-caps, anklets, and abdominal belts, all made of silk and vulcanized rubber, beautifully adapted to the purpose, and universally admired. For the treatment of Varicocele, we have lately introduced a new instrument, which is highly approved, and which it is believed will supersede all former methods of treatment. The increased demand for the above articles has rendered necessary the addition of separate apartments for the application, and we have associated with us an experienced physician (Dr. J. W. Riggs), who will attend regularly at our private hospital, and, when necessary, for the proper adjustment of instruments, will also visit patients at their residence.

Marsh & Co.,
2½ Maiden Lane, N. Y.

N.B. A competent female always in attendance.

A branch-store for the sale and application of the foregoing instruments has recently been opened at No. 5. West 4th-st. Cincinnati, O., by

Marsh, Corliss & Co.

and the same articles are also kept and applied at No. 25, South 7th-st. Philadelphia, Pa., by C. Marsh & Co.

MEDICAL INSTITUTION OF YALE COLLEGE.

The Course of Lectures, for 1854–5, will commence on Thursday, September 14th, and continue four months.

Benjamin Silliman, M.D., LL.D., Prof. Emeritus of Chemistry and Pharmacy.
Eli Ives, M.D., Prof. Emeritus of Materia Medica and Therapeutics.
Jonathan Knight, M.D., Prof. of the Principles and Practice of Surgery.
Timothy P. Beers, M.D., Prof. of Obstetrics.
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New Haven, May, 1855.

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Degrees will be conferred in March and July.

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B. Howard Rand, M.D., Professor of Chemistry,
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John Towler, M.D., Professor of Chemistry and Pharmacy.
Frederick Hyde, M.D., Professor of Principles and Practice of Surgery.
George Burr, M.D., Professor of Obstetrics, Diseases of Women and Children, and Medical Jurisprudence.
Caleb Green, M.D., Professor of Materia Medica and General Pathology.
James H. Jerome, M.D., Professor of Anatomy and Physiology.

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MEDICAL DEPARTMENT.

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FACULTY.

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Charles A. Lee, M.D., Professor of Pathology and Materia Medica.
James P. White, M.D., Professor of Obstetrics and Diseases of Women and Children.
Frank H. Hamilton, M.D., Professor of Principles and Practice of Surgery.
George Hadley, M.D., Professor of Chemistry and Pharmacy.
Thomas F. Rochester, M.D., Professor of Principles and Practice of Medicine.
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Buffalo, 1855.

UNIVERSITY OF NASHVILLE.

MEDICAL DEPARTMENT.

The Fifth Annual Course of Lectures in this Institution will commence on Monday, the 29th of October next, and continue till the first of the ensuing March.

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JOHN M. WATSON, M.D., Obstetrics and the Diseases of Women and Children.

W. K. BOWLING, M.D., Theory and Practice of Medicine.

A. H. BUCHANAN, M.D., Surgical and Pathological Anatomy.

C. K. WINSTON, M.D., Materia Medica and Medical Jurisprudence.

ROBERT M. PORTER, M.D., General and Special Anatomy.

J. BERRIEN LINDSLEY, M.D., Chemistry and Pharmacy.

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MIDDLETON GOLDSMITH, M.D., Prof. of Surgery.

WILLIAM C. KITTRIDGE, A.M., Prof. of Medical Jurisprudence.

CORYDON LA FORD, M.D., Prof. of Anatomy and Physiology.

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CASTLETON, VT., Jan. 1, 1855.

MEDICAL JOURNALS WANTED

AT THE

JOURNAL OF MEDICINE OFFICE.

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Western Journal of Medical and Physical Sciences. Edited by Dr. Drake. Vol. VII, No. 4. Vol. XII, No. 1.

Transylvania Journal of Medicine and the Associate Sciences, Vol. II, Nos. 3 & 4, 1829. Vols. III, IV, V, VI, VII, VIII, IX. Vol. X, Nos. 1, 3 & 4. Vol. XI, No. 2. Vol. XII, No. 1.

The Western Lancet, (Cincinnati, O.,) Edited by Dr. Lawson. Vol. III, Nos. 2 & 11, 1844–5. Vol. IV, No. 2.

The Western Journal of Medicine and Surgery, (Louisville,) Vol. I, Nos. 2, 3, 4 & 5, 1840. Vol. II, No. 1. Vol. III, No. 2. Vol. IV, No. 5. Vol. V, Nos. 1, 3, 4, 5 & 6. All these are previous to July, 1842.

Southern Medical and Surgical Journal, (Augusta, Ga.,) Vol. I, Nos. 1, 2, 6 & 8, 1836–7. Vol. II, Nos. 3, 4, 9, 11, 12. New Series—Vol. I, 1845. Vol. III, No. 11.

The American Medical Review and Journal, (Phila.,) Vol. II, 1825–6. Vol. III, No. 1.

The Ohio Medical Repository. Edited by Drs. Wright & Mason. Vol. I, 1826; also that portion of a volume of the same, which was edited by Dr. Mason, and published in 1835–6.

The Western Medical Gazette, (Cincinnati,) Vols. I & II, 1832–5.

Journal of Philadelphia College of Pharmacy, Vol. I, 1829–30, Vol. II, 1830-1.

American Journal of Pharmacy, Vol. I. 1835-6. Vol. II, No. 2.

* * *

For any one of the "*numbers*" mentioned in the above list, fifty cents each will be paid; and for the "*volumes*," the original subscription price. Any person possessing the same, and who would be willing to dispose of them on any terms, will confer a favor by addressing a note to Dr. S. S. Purple, 183 Hudson Street, New York.

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THE NEW-YORK

JOURNAL OF MEDICINE

FOR SEPTEMBER, 1855.

PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. I.—*Some Observations on the Fevers prevalent on the West Coast of Africa, made at Gaboon, Latitude* 0° 30′ *N., Longitude* 9° 17′ *East from Greenwich; during a residence of four years, from* 1851 *to* 1855. By Henry A. Ford, M.D.

These fevers, generally known as "African Fever," "Guinea Fever," "Bulam Fever," or "Coast Fever," so much feared by Europeans, and so often proving fatal to foreigners, are doubtless malarious in their origin, and, in general features, are similar to those produced by marsh miasmata in other countries and climates.

The face of the country, in this region, is of a nature usually found to be productive of malarious disease, and as a minute description of the topography of the country would lead me too far from my present design, I can only remark, that, like a large proportion of this entire coast, the land is generally low, often intersected by rivers and creeks, and covered by mangroves, bamboos, and other water-loving trees, and often overflowed by tides and freshets. This portion of the land seems to give character to the climate of the whole country, since although there is much dry land, and this is often elevated, yet it is so surrounded by swamps, that the atmosphere is uniform throughout the entire region.

These remarks refer entirely to the coast. Interior, the face of the country is different, and, unless the dense forests generate disease (or rather the cause of disease), the climate may be healthy. These regions, however, have never yet been tried on any extended scale, all settlements having hitherto being made on the coast, or upon the rivers that are on a level with the sea.

Before entering upon the description of these fevers I will premise that, from the most careful observations I have been able to make, I am led to believe that too much distinction has been made between the different forms of malarious fever. In these localities, at least the intermittent in its various types, the remittent or "bilious," and the continued forms (which last occasionally occurs in persons of a peculiar temperament) are essentially one disease. The great division of diseases, and consequent multiplication of names, is not a matter of so great consequence as the diversity of treatment instituted by many practitioners, founded on a supposed difference in the pathology of these several forms of fever. To this I object, and, for this reason among others, I have treated of them as one disease. The relationship of these forms of fever is proved by the identity of locality. They all occur in the same localities, among residents as well as among transient persons. Again, they attack different persons at the same time and under similar circumstances, and the same persons at different times. All forms follow the same law of return. That is, all (indiscriminately) are likely to recur at hebdomadal or lunar periods. I have observed no difference, in this respect, between the various forms.

Again, on the recurrence of fever, at these periods, one form often succeeds another. Again, it often happens that an intermittent becomes a remittent or continued fever—and again, the last become intermittent. The last change happens in cases of gradual convalescence—the first in the increase of disease often arising from some organic cause. Lastly, the same general course of treatment is adopted in each form of fever. Though, in the opinion of many, the last proof may itself need to be substantiated, I can only say, I verified the propriety of the treatment in a large number of cases.

In view of these facts, I shall, in my "observations," first point out the appearances common in our cases of *fever*, afterwards (for the sake of greater clearness) note those symptoms that are peculiar to the different forms or phases that *fever* assumes.

To a person accustomed to observe his own sensations, there is generally a preparatory stage of fever, anterior to the (so called) stage of "invasion," which, though often overlooked or forgotten by the patient, is a part of the disease. This stage is of great moment, as it regards treatment; since in many cases, perhaps uniformly, the disease may be stopped here—the subsequent stages entirely prevented. It appears to be (or serves as) a warning given by Nature of approaching disease.

I believe that it is not peculiar to miasmatic fevers, perhaps not to fevers. The same symptoms are noticeable in the commencement of inflammatory diseases.

The variations from a healthy standard, in the sensations, as well as in the functions of various organs, are numerous. For a length of time (perhaps days) before the access of fever, the patient notices a loss of appetite, restlessness or sleeplessness, an unpleasant taste in the mouth, particularly on rising. These may be attended by constipations, and subsequently by uneasiness and restlessness or weariness. The most intense weariness I ever experienced has come on *spontaneously* in this stage of fever. There is a susceptibility to cold, and dryness and harshness of skin is present. The urine is copious and pale, which are often the first symptoms noticed by the patient. The pulse is usually unaltered, though sometimes frequent and small. There may be slight headache and irritability of stomach, though these are usually developed later in the disease.

The mental faculties are usually slightly disturbed. There is an incapacity for close thought, and the patient is soon wearied by study. The imagination, however, is occasionally active, and the patient shows a restless desire to be engaged, without the ability to confine himself to any particular engagement. There is occasional moroseness and feverishness, or perhaps timidity and an indefinable apprehension of coming danger. These symptoms appear separately, or are variously combined in greater or less intensity in different individuals, and at different attacks.

There are, however, many cases in which this formative stage does not occur, but that of invasion makes a sudden irruption. Some exciting cause comes in, giving rise to the fully developed attack at once.

In susceptible persons, this happens after exposure to the direct rays of the sun; severe and long continued exertion; sitting in wet clothes after a rain, the wetting not proving as injurious, if the person is able to obtain shelter and dry clothing. Great mental excitement produces a chill, as joy, sorrow, or fear. In these cases the attack is prompt and powerful, but not usually serious in its results.

After an indefinite period, varying from twelve hours to two days, another series of symptoms set in. These, though equally varied, are more apparent. This, usually called the "attack," is in part the second stage, or that of "invasion." It begins with a disposition to yawn and stretch, succeeded by cold. The patient wishes to shield himself from the wind, or put on additional clothing, or lying down covers himself with blankets; feeling the cold, however, in his feet and hands first, from thence it passes to the spine, and creeps over the whole body, always, however, producing the impression that the seat of the disease is in the extremities of the spine, to which the patient begs to have the heat and stimulants applied. If cold is not speedily relieved, the chill becomes a rigor, although I have not often known an uninterrupted chill prove as severe as in the common intermittents of the United States.

In some cases the chill is light, but it is attended by nervous symptoms of a most distressing kind. The patient seems paralyzed, dizziness comes on, he seems unable to stand or walk. Either from an exclusive attention to his own feelings, or real mental aberration, he is unconscious of objects and scenes about him, and only complains of prostration and want of breath. Occasionally the chill is attended with pain in the back and limbs, extending even to the feet, with headache. Some patients uniformly feel deeply-seated pain in the epigastrium, which produces faintings and intense prostration. Others complain of a belt of pain around the body on a level with the umbilicus, or higher up through the inferior parts of the chest; others feel pain simulating pleurisy, pervading the chest and impeding its movements. In case of chronic uterine disease there is often intense pain in that "organ" and the surrounding parts, extending to the hypogastrium and the iliac regions, as well as to the sacrum, simulating the true acute hysteritis, which, however, need not be feared, as the pain subsides before the close of the succeeding stage.

The general appearance of the patient is characteristic of the stage of the disease. The face is pale, the skin shriveled, the nose contracted, or apparently more pointed than natural, the lips blue or purple, eyes dull and heavy. The pulse is unusually slow and feeble. This chill usually yields, under the application of heat and stimulants, after a short time. In many cases, however, even these applications are unnecessary, as the chill subsides spontaneously, but occasionally it returns on the accession of the third stage, making the patient exceedingly uneasy by distressing alternations of heat and cold, flashes of heat and chills succeeding each other.

In a large number of cases, however, there is no chill at the "invasion," but headache, nausea, pains in the back and limbs, and various sensations such as are described as attendant upon ague. These take its place, for a time, and eventually pass into the third stage—the stage of invasion. I have noticed this mode of attack, in cases of new residents, in first fevers, such persons usually supposing that they have "a cold," or are weary, and do not admit that they are sick, until the fully developed hot stage forces them to apply for aid, though cases often happen in which they delay until the use of remedies becomes vain, and death follows as the penalty.

In regard to the time of the accession of the second stage, I have observed, in this climate, a marked variation from the hours at which it is represented by most authors to make its appearance here. Though a large number of persons have been attacked during the day, usually in the forenoon, yet many are attacked at *night;* some on retiring to rest, some uniformly at or about midnight, and others some hours before day.

After an indefinite period, varying from one to six hours, the chill gradually subsides, the body becomes warm, and the extremities soon return to their natural temperature. The reaction, however, does not stop here; the patient, from feeling a pleasant glow which is often very grateful after the rigors just passed, begins to complain of heat. He throws off the bedclothes and asks for air; the skin becomes red and hot; face loses its shrunken appearance, becoming turgid; the eyes appear bright and watery; the pain in the head, if it previously existed, increasing; thirst usually becoming urgent; nausea coming on, with pain in the back and limbs, as in the previous stage. The nausea is often a most distressing symptom, not only harassing the patient by vomiting, but producing intense thirst, and forbidding the use of remedies by the mouth. In many persons it is a constant attendant on fever, from first to last, and becomes the most serious complication in the course of this disease. This occurs in cases not otherwise serious and entirely uncomplicated with organic disease.

The pulse always in the beginning increases in frequency and force—those cases not excepted in which the pulse subsequently falls, which are hereafter to be described. The range, however, is very great, being from 80 to 130 beats in a minute, even in mild, uncomplicated fever.

The urine is always changed. It becomes scanty in most cases. The color in ordinary mild cases is brown, in malignant cases, *red* or *black.* There are no more constant symptoms of violent disease than these changes in the urine. No patient can be considered out of danger, while the urine remains red or black. Inspection of this secretion should never be neglected by the attending physician.

When the fever is fully developed, in addition to the headache, a variety of strange sounds are occasionally heard, as whistling, murmuring, and crackling noises; at other times there is deafness. These all simulate the effects of quinine, and are sometimes mistaken for them, which is the more unfortunate, as they indicate grave disease. The diagnosis, however, is not difficult, if the attendant physician have a clear idea of the sensations caused by quinine. It seems to the patient as if the ears were stuffed with cotton, or some other soft substance. The deafness is not a simple abolition of hearing. The patient is inclined to pick his ears, as if some foreign substance were in them. Quinine is, furthermore, attended by perspiration in most cases.

The tongue, in the commencement of fever, is usually clean or covered only with a slight, white fur. If, however, the disease remain unchecked two or three days, the fur becomes thick and brown, or yellow. When the paroxysm remits, the tongue soon begins to throw off its load, commencing at the edges and tip. The appearance of the tongue in this, as in other fevers, is diagnostic of the stage of the disease. If it clears gradually from the borders; the central fur becoming rugged and broken, the disease may be considered as yielding. If, however, the fur flakes off in the center of the tongue, leaving a red surface, some gastric or other disease of the alimentary canal may be suspected. In favorable cases, the tongue often loses its entire coating in a few hours. If the tongue remain loaded and become dark-colored, with sordes on the teeth, the patient is becoming prostrate and demands active stimulants.

This stage of fever is variable in its length. In most cases there is an intermission, or remission, within twelve hours, although the paroxysm may continue, under some circumstances, eighteen or twenty hours, still retaining the character of a true intermittent. Remittents are occasionally still more tedious. These remarks refer only to the first paroxysms. If cases are properly treated, the future paroxysms will not be protracted beyond twelve hours in simple fever.

The fourth stage, that of "resolution," is ushered in by perspiration, which first appears on the forehead, neck, and arms, and is gradually diffused over the whole body. Occasionally, this is sudden and profuse, but often slight and evanescent—a simple moisture. The pains in back and limbs abate, the headache subsides with the nausea, the urine becomes more copious and of lighter color, the pulse lessens in frequency—often very decidedly—occasionally falling to its natural standard.

This is the end of the fever, so far as it can be said to end spontaneously. It is the signal for action on the part of the physician. If the opportunity is improved, succeeding paroxysms will be ameliorated—often they can be prevented.

The period of convalescence depends upon the severity of the attack. If the fever is checked after the first or second paroxysm, the confinement will be but short, and, after a day or two, the patient resumes his employments. If the case is complicated with visceral disease, it becomes tedious and dangerous according to the severity and obstinacy of the organic affection, and the stage at which it is noticed and treated. Affections of various organs, most frequently of the liver and spleen, may escape notice for a long time, becoming obstinate in proportion to their continuance.

Having given a general description of fever, as it occurs in these localities, I shall proceed to point out its various forms as they have fallen under my notice, and its complications as far as I have been able to detect them.

These forms differ in respect to the duration of the paroxysms, and the nature of the interval between them, and are named, accordingly, intermittent, remittent, and, in case of the absence of any appreciable remission, continued. They may also be classed with reference to their organic affections, with which fever is connected, as complicated and simple, and, with reference to certain dangerous symptoms or peculiarities (independent of organic disease) malignant and benign.

These classifications appear to me to embrace the most important peculiarities of fever. Of course these specifications will not be understood to refer to as many different forms of fever, but, as the several classifications are based on different series of symptoms, one attack may be classed under three different heads at the same time.

The intermittent is the most common and usually the mildest form of fever. In many cases the first stage is slight and rarely noticed by the patient, though this is by no means a universal rule. The chill or the nervous symptoms that substitute it are strongly developed, and, in cases of malignity, the shock to the system is very great, as will be described under the head of "malignant fever." The chill in intermittent cases continues longer than in other forms, and does not seem to bear any relation to the force of the subsequent fever. This stage does not often continue more than two hours, often it is less than one hour, although, in some severe cases, there is a mixture of chill and fever (heat), continuing several hours, as before mentioned.

The termination of the chill and access of the hot stage is as described in the foregoing general remarks. Ordinarily the fever is high, the pulse is strong, full, and frequent, usually exceeding one hundred beats in a minute. The headache is often violent, nausea and thirst urgent, pain in back and limbs continuing from the cold stage, subsiding, however, before this stage is at an end. The length of this stage is usually short, not generally exceeding six hours, often less, although cases occur of much greater length. In uncomplicated fever this is rare.

As the fourth or sweating state approaches, all the violent symptoms subside, with a full flow of perspiration, and after a few hours, especially after sleep, the patient feels restored. In many cases, however, the intermission is imperfect, resembling a remission, but, under treatment adapted to the prevention of the succeeding paroxysm, the patient soon entirely recovers.

This description may be the entire history of the disease. Under treatment this is often the case, but rarely without. The intermission, of which the sweating stage is the commencement, is ordinarily of short duration. The same series of chill, fever, and sweating is repeated, at the end of twenty-four or forty-eight hours from the beginning of the first paroxysm. Without the interference of the physician, however, there is danger of an arrest of the changes that complete the circle, and, in malignant or complicated cases, it often happens that there is no second period of resolution, but the hot stage continues for an indefinite time, or perhaps to a fatal termination.

Occasionally, during the second paroxysm, if no *efficient treatment has been instituted during the first intermission*, the ordinary interval is very imperfect, and the third and fourth chills return within a short time, making, as I have seen, three paroxysms in twenty-four hours. Such prove obstinate and often become continued. These cases have, as far as I have observed, followed *first* paroxysms of *simple*, *light* fever, in no way differing from those previously experienced by the same patients, which were uniformly stopped on the first day.

There is another noticeable variation of type, which in my experience has been obstinate in its course, and one case resisted treatment until the fourteenth day, that is, until the seventh paroxysm. It was a *double tertian* in which the second paroxysm began twelve hours after the first, and the interval between the second and third thirty-six hours, that is, the first coming on at sunset, the second follows at the succeeding sunrise, while the third attacks at sunset of the following day. The only cases of the kind that I have noticed have followed remitting fever at the end of a week, observing the hebdomadal period.

The remittent form of fever commences with a longer and more sensibly developed formative stage. The patient frequently complains of poor appetite, restlessness, giddiness, disinclination to labor with body or mind, with other manifestations of disordered vital actions, as described in the preceding general remarks. In those persons who recognize these appearances and use the appropriate remedies, the threatened attack is often prevented, but in the natural course of the disease the second stage follows the first after a short interval. The chill is often undeveloped, and a slight sense of cold, with distress in head, back, limbs, with nausea, takes its place. These soon pass into the hot stage. As the second stage is not so definitely marked as the ordinary intermittents (this is not uniformly the case), so we do not find the change to the third stage as prompt and definite. The pulse gradually rises in force and frequency, the heat of body increases, and headache and nausea become urgent; the furred tongue and highly colored urine follow. This stage usually continues longer in these than in the preceding form, subsiding, or rather abating within twenty-four hours (often eighteen hours) from the commencement of the chill.

At this stage of the disease, there is often much time lost in waiting for a perfect intermission, or in attempting to procure it by various means, other than those designed to prevent another exacerbation. The remission, as the name implies, is often marked by only a slight decline of pulse and an amelioration of the distress and heat of fever. There is often but little perspiration and an unimportant change in the color of urine.

At or before the hour of "invasion" of the previous day, this remission, with a slight chill (perhaps without), passes into a hot stage, which in turn remits as before. If left without treatment, however, it encroaches on the succeeding remission, and again the paroxysm anticipates its time at the next exacerbation. This can be prevented only by vigorous treatment during the first and second remissions.

Though in ordinary cases the arterial excitement does not rise as high as in the early paroxyms of intermittents, and for this reason are not looked upon by many as very formidable, yet careful observation will show, that, in an uninterrupted remittent of four or five days' standing, the pulse becomes very frequent, and skin hot and dry, and cerebral pain very distressing. Under these circumstances, the fever becomes continued, or the patient suddenly dies from the violence of the disease, without apparent visceral complications or even the malignant symptoms (that often prove fatal) hereafter to be described.

Remittents follow upon neglected intermittents, or those that have become complicated with organic disease. During the second and third paroxysms, these difficulties very frequently arise, and greatly aggravate the fever.

The continued form of fever has been rare within the range of my observation, except as the termination of the other forms; but I have met with a *few well marked cases.* The first stage is similar to that of the intermittent form, the premonitions evident, the chill slight, sometimes entirely wanting. The period of excitement continues an indefinite period without appreciable remission. It has not occurred to me to meet with any cases of more than five days' duration. At this time, the fever has begun to subside, without a marked crisis. The hot stage has been similar to that of the remittent. There has, however, always been in my cases a remarkable irritability of stomach, in some cases simulating gastritis; but these difficulties have yielded with the fever. I have seen but one fatal case. In this, the patient died on the fifth day, from the violence of the disease, without apparent organic lesion of importance. In this case, there was no treatment instituted until near death. This peculiar form seems, in some cases, to depend upon excitability of constitution. Persons susceptible to the common climatorial influences, suffering often from the debilitating influences of the climate, and great nervous irritability, seem to suffer in this way, though generally this fever is not more violent than other forms.

I have already spoken of some complications to which fever is liable, which greatly aggravate it, always protracting it, and, if undetected, often rendering it fatal. I have given these cases a separate place and consideration, not because they belong to a distinct form of fever, being embraced in the foregoing divisions, but that they may be the more noticed, as I am satisfied that there has been much suffering and loss of life dependent upon organic disease, which from its insidious nature has not been suspected.

These complications are inflammatory and congestive. The most frequent are affections of liver and spleen, more rarely of the stomach and bowels. In whites, the lungs are very rarely affected. The brain is often the root of congestion and inflammation, although I do not consider these difficult of detection. Congestion and sub-acute inflammation of the liver are often undetected by pressure; the patient feels no pain, but it may easily be known by the dullness on percussion. There is often no tenderness in the part; either because there is no soreness connected with the disease, or because the tender part is out of reach of pressure. Percussion not only detects dullness, but often sensibility. The same remarks may be made in regard to the spleen, which is even more frequently subject to *chronic* enlargement, and is constantly liable under these circumstances to excite fever. No person is perfectly safe, with these enlargements, on this coast.

In cases of fever, in which the excitement returns after the second intermission (or remission), the appropriate treatment having been instituted, I consider there is reason for suspecting organic disease. It may be simple congestion, or, more probably, inflammation. In case of chronic enlargements of spleen or liver, any exciting cause of fever —as exposure in the sun, loss of sleep, excess in eating or drinking, or the return of the day in the week on which the patient has previously been attacked—will rekindle the fire. In these cases there is always a necessity for the patient to return to a cold climate, at least for a time. The patient may recover from many attacks, and be perfectly comfortable and apparently well for a time, yet the difficulty is sure to return, if the local disease remain. The attacks of fever eventually become malignant, and the patient dies.

That class of cases in which the inflammation follows the onset of fever proceeds very insidiously, as was before mentioned, often perplexing the physician and baffling his skill, if the real course of disease escapes notice; which it is likely to do, unless particular search is made for it. Under this influence, the periodic attacks degenerate into continued fever. Therefore, on the first appearance of obstinacy, a thorough *manual* examination should be made. The *subjective* signs are of little comparative value.

Splenitis is much more easily detected than hepatitis, as the organ becomes larger, harder, and more irregular in shape, frequently presenting sharp angles, and yet, strangely, this has escaped notice for a long time. It has, even in some cases which have come under my care, so far enlarged as to interfere with the movements of the heart, and then for the first gained the attention of the patients, who have supposed that they suffered from cardiac disease.

I may here remark that this chronic enlargement of spleen is not peculiar to whites on this coast, though more troublesome and dangerous to them than to natives. The native children often suffer from it. The abdomen is greatly enlarged by the viscus, and its outlines are occasionally visible through its walls. The same is true of grown persons, in some localities and under some circumstances. I have noticed that pregnant women (natives) have enlarged spleens, particularly in the puerperal state, immediately after delivery. Some have been brought to me in this condition, which, to the natives, seemed hopeless. Such, however, are extreme cases. Ordinarily, the disease readily yields to treatment; often, no doubt, subside spontaneously.

Cerebral inflammation, and congestion are not unfrequent complications of fever. The pain of inflammation may be neglected on the supposition that it is only the effect of fever. It is not easy to draw a line of distinction between the pain of incipient inflammation and that of fever; but the pulse affords the best datum. If the pulse remains full, strong, and frequent after the time for the remission, or if it rise with the pain, there is good reason for suspecting inflammation. In all cases in which the headache has resisted the ordinary palliatives, and has continued into the second intermission, I have not hesitated to use active remedies, particularly in those cases in which unnatural sounds have been heard by the patient.

Malignant Fever. The term malignant is here applied to certain forms of remittent and intermittent fevers, that are characterized by several dangerous symptoms, which, on account of their severity, demand a separate consideration. This form of fever is by no means regular in its mode of attack. It may begin as a benign intermittent, showing its peculiar character only in the second paroxysm, or may show its nature at the onset. Occasionally, the patient is pale and feeble for days before the attack, having various other premonitory symptoms as described above. In several instances it has, under my observation, followed attacks of benign intermittent, after the interval of a *week*.

At the commencement, the patient's skin assumes a yellow color; the face a haggard appearance. It seems shriveled and pointed even before the chill comes on. Immediately after the chill (perhaps before it has passed off), the urine, which is usually free, becomes red or black. The stomach next becomes irritable, ejecting yellowish fluid, with the ingesta. The bowels are often free, and move with yellow or red dejections.

These symptoms may not be all present or well marked, at first, but usually appear to a greater or less extent during some part of the paroxysm. The patient is usually stupid, but showing signs of great distress—often moans and turns from side to side. These symptoms constitute the first paroxysm. There may be, however, a previous mild paroxysm, which is not here considered. After a few hours there is an intermission, in which there may be a decided amelioration of all the symptoms, but the yellowness of skin and red urine do not disappear entirely.

At the end of twenty-four hours (as I have only seen this form in quotidian type), the disease returns with augmented force. The patient is tortured with thirst, but vomits all ingesta; bowels become irritable, so as to reject all injections per rectum, the urine assumes a darker hue, often foams as it is passed into the chamber, the alvine evacuations become bloody and the ejections from the stomach become green and finally black; and the mental obtuseness increases with the other fatal appearances.

Toward the close of the second day there may be an attempt at an intermission, which, however, in cases without treatment, has always, as far as I know, failed. During the third day the patient becomes insensible, the pulse irregular, the breathing slow, often less than sixteen respirations in a minute, which afterwards degenerates into a deep sigh which is repeated at an interval of several seconds. In another class of cases, the patient retains his senses much longer, and the respiration remains nearly natural for a much longer time, but the surface in these cases seems to be much sooner paralyzed, becoming cold and cadaverous to the touch, the stomach *seeming* to be in the same condition. The pulse becomes feeble and rapid, until it ceases entirely at the wrists, which happens several hours before death. This often takes place within sixty hours. I have not seen a third intermission in a fatal case, for although the patient may live until the fourth or fifth day, all distinction of stages is lost.

The peculiar symptoms of this fever, by which it may frequently be detected very early in its course, are yellow skin, red or black urine, together with vomiting of yellow fluids, and intense restlessness or stupor, frequent chills following each other at six or eight hours interval, or one violent chill followed by stupor or violent pain in the head.

These observations refer to the disease unchecked by treatment. If, however, the appropriate treatment is early and vigorously used, the second paroxysm may be ameliorated or prevented, and the disease terminated on the third day.

In all cases of malignant fever, any inflammatory complication will aggravate the disease. Most of the fatal cases that I have seen have been of this description. Some of the cases have suffered under old splenitis or hepatitis, or it had been found too late, as recent inflammation had sprung up during the course of the disease.

Causes of Fever. Without dispute, the great exciting cause of this fever is found in the constitution of the atmosphere. It is a *malarious* fever. The peculiar depraved condition of the air on which this propensity to fever in Europeans depends, I am unable to determine, at least I am not satisfied with any explanation I have seen or can assign. The heat of climate is not excessive. The thermometer, in all localities along this part of the coast from which I have been able to obtain observations, has ranged from 65° to 90° (F.); a degree of heat less than in many salubrious localities in other parts of the world. Of the comparative *moisture* of our climate, I cannot make any just estimate, as I have had no opportunity to compare my hygrometric observations with others. This, however, I may hope to do at a future time. My belief is, that we have, at a short distance inland, as dry an atmosphere as the heat of the climate will allow.

We find but little mould and decay in places well protected from the sea breeze. The prodigious production of fungi in various localities on this coast, as *described in books*, I have never seen or heard of *here*.

The predisposing causes of fever are numerous. Among the most important are sedentary habits; in which many are led to indulge by the debilitating influence of the climate. All students and writers, who do not take much active exercise in the open air, are subject to fever. Many ladies, on various parts of the coast, living in inactivity, suffer from fever. Temperament is a predisposing cause. Persons of a nervous temperament, and those of light hair and fair complexion, or those of dark complexion but of strumous habit, are peculiarly susceptible to the influences of this climate. Licentious indulgence, for which degraded Europeans find ample scope on this coast, predisposes to fever in a large number of cases. Intemperance *indirectly* subjects a person to the malarious influence. Though the first effect of spirits is to protect from atmospheric influences, yet, after this effect has passed off, the person is more liable to contract fever than a temperate man, and this is likely to be more violent. Sailors who remain on shore over night, in a state of intoxication, are usually attacked with fever, although sober men may frequently do so with impunity. From the best information I can obtain, I am led to suppose that the white soldiers, formerly used (or rather lost) on this coast, fell a sacrifice to habits of intemperance.

In females, that condition of system attendant upon the menstrual flux is a strong predisposing cause. Many females are attacked with fever at their monthly periods. In case of uterine disease the predisposition is still stronger. One attack of fever predisposes to another. The sooner a person is attacked, after his arrival on the coast, the more frequently and severely is he likely to be attacked. As fever follows the hebdomadal period in its return, the recurrence of every seventh day after any attack will predispose to fever. The intervals at which different persons are attacked are various. Some suffer weekly, some bi-weekly, some tri-weekly, or monthly. The most common interval within my range of observations has been fourteen days. The bracing air on the coast often produces fever in those accustomed to the atmosphere of the interior. A change of place is a cause of fever in many: even in persons who go from an insalubrious to a more favorable climate. This is often the case with persons going to sea; they often suffer from one or two severe attacks of fever.

Besides a propensity to fever, on a temporary change of residence, I have noticed that particular persons enjoy much better health, in localities considered very insalubrious, than in those that are inhabited with safety by large communities, and, on return to those localities, they have regained the health that they have lost in these *apparently* salubrious localities. A long residence in a malarious region powerfully predisposes to fever. This effect is produced indirectly by causing visceral disease; in other cases, by producing the debility common in hot climates; but, beside these effects, a long residence begets a proneness to fever, in sound and strong men. Hence the necessity of occasional retreats to cool and salubrious countries.

Treatment. The treatment that I have resorted to most successfully in mild fever is very simple. It is entirely prophylactic. It is designed to prevent the attack, or rather to prevent its full development if detected early, or the repetition, if the paroxysm is fully formed. During the forming stage, I have given quinine in sufficient quantities to bring the system entirely under its influence before the chill comes on. This is possible in many cases, though frequently patients do not detect the premonitions of disease; in this case, we must wait until the intermission. In numerous cases, however, in which patients have been willing to attend to their own feelings, and employ remedies faithfully when they have felt the approach of fever, I have had the gratification of seeing them enjoy perfect immunity from this species of disease, though previously suffering from frequent attacks.

The same success has attended the use of remedies in cases in which fever returns at fixed intervals. The patient takes quinine just before the time of the expected attack. It is safer to commence the use of the remedy the day before, so as to anticipate the disease. This use should be continued every seventh day for a long time; the quinine should be taken in sufficient quantities to be slightly felt by the patient. The peculiar sensations produced by this remedy are singing about the ears, or whistling, or dashing sounds accompanied with deafness. This, however, is characteristic; it *seems* to be produced by filling the ears with some soft substance. It is not a simple loss of hearing. Ten grains in a day is ordinarily sufficient. The quantity required in health is less than in the best intermissions. In ordinary intermittents, it is not designed to cure the paroxysm, but to mitigate its violence, if severe, and prevent its return. To effect this with certainty, the quinine should be given soon after the hot stage has begun to subside. Though this is not customary in many countries, the treatment being delayed until near the end of the intermission, I consider it necessary here for several reasons: 1st. The intermission may be short, the paroxysm anticipating its hour on the succeeding day. 2nd. An irregular chill may set in. 3rd. Though a person may have been subject to tertians only, he can not be sure that the same type will be preserved. The fever is liable to become quotidian on any new attack.

For these reasons, I have not ventured to delay the treatment long after the commencement of the intermission. Besides, it occasionally happens that there is much difficulty in bringing the system under the influence of the remedy, and, consequently, time is needed. It is far better to begin too soon than too late, as the only difficulty arising from this course is, the unpleasant sensations produced during the time. It is the aim of the physician to pre-occupy the system with quinine. In this way, the fever will either be unable to rise, or be greatly mitigated in force. These remarks will apply to remittents as well as intermittents. Greater care is required to observe the first decline of the fever, and make use of vigorous treatment. If there is no complication, the same remedy is sufficient.

In administering quinine, I have been accustomed to give six grains every hour until its peculiar effects were produced. This usually takes place at the end of three hours—often sooner. After this, very small doses (two or three grains), once in two hours, will keep up the effect until the time of the expected paroxysm has passed. The medicine should be so administered as to bring the system under its influence three hours before the expected attack. If it is not convenient to administer the medicine in small doses frequently, ten grains may be given at the beginning of the intermission, and repeated at the end of four or five hours afterwards, always repeating smaller doses to maintain the effect of the remedy. In most cases, twenty-five grains given in time will produce all the effect desired, will prevent the return of the chill, but, in some conditions of the system, twice that quantity is necessary. As has before been said, the effect upon the system is the only guide in the administration. If a large quantity is demanded to produce "quininism," there is, as I believe, the greater necessity for the full action of the medicine. As to any theoretical objections to the use of fifty or sixty grains in one day on remission, my experience in my own person, as well as in numerous patients, proves them to be absolutely imaginary. I have never seen a case prove fatal or even troublesome, for any length of time, that was treated with decided doses of quinine. All the deaths that have occurred within my observation, have been in cases in which small doses of quinine have been administered, or in persons who have been unable to retain this remedy in any doses.

Hitherto I have considered the use of quinine as a prophylactic, given in the intervals or before the actual onset of disease. I have used the same remedy successfully to subvert fever. In several cases, violent *continued* fever has yielded under the constant use of quinine. The amount required to affect the system is greater during fever than in its absence, but a persevering use of the remedy will produce its characteristic effects, and the disease will eventually yield. The resolution of the fever is not, however, so sudden or entire as the spontaneous resolutions of the paroxysmal forms. As it regards the time at which the quinine may properly be administered, in cases that show no disposition to remit, I think it is not advisable to delay more than eighteen hours from the time of invasion. If the fever persists beyond this without an attempt at remission, I give the quinine to produce one. I use quinine in this manner from a conviction that it is not a stimulant.

It often depresses the pulse and produces free perspiration. It has never occurred to me to see any increase of pulse, either in force or frequency, from large doses—on the contrary, I have seen decided diminutions of frequency in various cases in which the largest doses were administered. In a healthy person, largely under its influence, the pulse is slow, full, and soft, the skin cool, soft, and moist.

In the administration of quinine, there is often much difficulty in so covering the taste as to secure its retention in the stomach. Many persons conceive a great repugnance to it after frequently taking it. It often causes nausea, and is sure to increase it if pre-existing. Though a person may take it in health without difficulty, on the attack of fever the stomach rebels. The difficulty depends upon the bitterness, or, subsequently, upon the action of the medicine upon the stomach. A variety of expedients have been used to introduce the quinine into the system. It has been exhibited by the mouth, concealed in various menstrua; it has been given in injections, per rectum, and by frictions to the skin. It has been combined in form of pill with various substances, as morphine, or crude opium, oil of pepper, or camphor. These are designed to prevent subsequent nausea, and the pillular form obviates the bitter taste. I have usually found this the most available form, the only objection being its tardiness in operation. If, therefore, the time is limited, it is not safe to trust the pills. If they are made of some very soluble menstruum, they may be used in ordinary cases.

I have found a little treacle, or paste made of flour and cold water, very soluble. They, however, degenerate by age. Quinine pills made with an aqueous solution of gum Arabic, soon become as insoluble as marble; the "syrup of gum" is but little better than the solution. I have seen pills of this kind discharged, per anum, on the fourth day, unchanged. Quinine given suspended in coffee or tea, loses most of its nauseous taste, and does not nauseate afterwards. Some can take it in wine, and others in the bitter tinctures, the gentian and cinchona substituting their own bitterness for that of the quinine. The aqueous solution (or suspension), if tolerable, is the most prompt and valuable mode of administration ; some acid united with it is thought to hasten its action ; it doubtless increases the bitterness. The administration by enema, with starch and laudanum, is a very convenient mode, and is a very good resort in case the patient cannot swallow the medicine. There must be an addition of one-third or fourth, as it does not operate as powerfully as if given by the stomach. Some use acid, but it irritates the bowels, thereby causing its own discharge.

Of all other anti-periodic remedies recommended by authors, I have found none worthy of confidence, except the arsenite of potash, which has done good service as an adjuvant of quinine. I have prescribed the tincture, wine and infusion of cinchona, as tonics and prophylactics, to be taken constantly for months, and have seen them produce very good effects. The treatment to be used during the chill consists of stimulants, internal and external, and applications of heat. The patient usually covers himself in bed, and finds some comfort in the application of heated irons or stones, or bottles of hot water.

The stimulating frictions used are mustard or pepper. The first is frequently applied in poultices, to large surfaces on the back, arms, and legs, and often proves very beneficial in equalizing the circulation and restoring the temperature. The fresh peppers, if actively applied, produce much burning, which usually cuts short the chill, and seems to lessen the succeeding fever also. It seems to check the whole train of morbid phenomena; the pain in back and limbs quietly subsides with the general distress accompanying it. The great objection to the use of the peppers is, the difficulty of controlling or regulating its effects. The patient often suffers severely, and it is difficult to assuage the pain. In some cases it has been necessary to use the cold bath, but such is the effect of the stimulations of the pepper, that the chill does not return, even in the cold water. The vinegar, or tincture of the peppers, may be used more safely —they do not produce such violent effects.

The only treatment, during the hot stage of simple fever, is diluents, as lemonade, and other acid and cold drinks. If the urine is scanty and very high colored, the spirits of nitre may be given in water or weak tea. In case of costiveness, this is the appropriate stage for the exhibition of cathartics, which should be given so as to act from four to six hours after the commencement of the fever. Given in this way they not only fulfill their primary indication, but they assist in bringing about the stage of resolution, if they operate at the time at which the hot stage would naturally pass off. The best cathartics appear to be the resinous, in combination with calomel. The "compound cathartic pill" is very useful and easy of operation. I, however, have used a similar combination with hyoscyamus, which is often needed to prevent the irritating effects of the other remedies.

The constant and indiscriminate use of cathartics in fever, cannot be other than injurious. I have seen much irritation of the bowels and nervous depression arise from their use in the early stages of fever, and general prostration in the later stages. I do not believe it is best to give cathartics, simply because a patient has fever, but only for the relief of some unfavorable symptom, or to correct some deranged function, or act upon a diseased organ. In complicated cases, they are necessary, and must be used; but if the fever is simple and benign, and the bowels open, the patient will be quite as safe and much more comfortable without. In case of continued, or obstinate remittent fevers, I formerly gave calomel in small "alterative" doses, and with some success; but I was often disappointed in the result, though ptyalism was produced, and I found the operation of the medicine more prostrating, and convalescence more tedious, than in the exclusive quinine treatment. In great heat of body and dry skin, I have used the cold bath; or, if the patient could not bear this, the wet sheet, or sponging with cold water. The headache is frequently relieved by the application of cold water. If the fever subsides while the pain remains, mustard to the neck and back often entirely relieves it. Morphine, under the same circumstances, also in case much nervous excitability attends the pain, will be found very useful. The infallible remedy, however, is leeches. In all cases (when other means have failed), I have found them entirely successful. Cupping the temples, though less convenient, is a substitute for leeching. Nausea, if urgent and continued, may be relieved by effervescing draughts, or mustard to the epigastrium, or, if these fail, by some preparation of opium; the "black drop," or opium pill, are perhaps most efficient. Hydrocyanic acid is sometimes very efficient. It has been administered in connection with quinine, with happy effects.

In complicated fever, an energetic course of treatment must be adopted.

If the inflammation is active and recent, either of liver, spleen, bowels, or stomach, leeches should be freely applied, or, in the absence of these, cups. In connection with these means, calomel, in small doses, is very useful. Its use should be carried to slight ptyalism, unless the urgency of the symptoms abates. In splenitis of a violent grade, I have seen all pain and heat abate under the use of leeches alone. I have never found it necessary to use mercurials largely in this disease. Blisters have followed the primary treatment, that of abstraction of blood, and completed the cure. Cathartics are of more value in splenitis than in the other inflammations just mentioned. In one severe case of gastritis, for which I was unable to obtain leeches, I trusted entirely to mercurials; on the commencement of ptyalism, which took place very promptly, the pain and nausea of the disease suddenly subsided. So remarkable was the coincidence, that the patient, unasked, pointed it out.

In hepatitis, blisters may be used early, as the inflammation soon becomes sub-acute; they may be applied the second or third day after the leeches, the bites being covered with bits of adhesive plaster, or, if the "fluid" is used, it may be applied around them. They are very useful in subduing induration, and in chronic cases, vesication is the great local remedy, to be used in connection with mercurials. All such cases, however, should be actively treated after the fever is subdued, its return being guarded against by the timely use of quinine. In the treatment of the complicating local disease, the fever is not to be forgotten, but in the remissions is to be treated with quinine.

These cases are tedious, being protracted by the local difficulty. In cerebral complication, I have always used leeches with success. I have never, in whites, been obliged to resort to general depletion. The leeches have been followed with cathartics. Under this treatment all my cases have yielded. Quinine, with morphine, in the remissions (which are often but slight), gradually subdue the fever.

In malignant fever, the treatment must be prompt and energetic, as the case is almost certain to prove fatal if it goes on to the third paroxysm.

If there were, in all cases, a certainty of gaining a perfect intermission, after the first paroxysm, quinine might be depended upon as a safe remedy, as I believe the disease is controllable, when there is an opportunity of bringing the system entirely under the influence of this remedy; but, as the intermission is often imperfect, I have thought it safer to give calomel during the first paroxysm. I have given 20 grains at a single dose as a cathartic. At the first operation, the urine has notably changed in color, and other symptoms have been mitigated in severity.

The system should then be brought entirely under the influence of quinine, as early in the intermission as possible. The same treatment should be used in the second intermission. If the second paroxysm is severe, the mercurials can again be used, but in less quantity, or the quinine may be continued in connection with it. Usually this paroxysm will be light, and the fever lose its malignant form.

It may then be treated on the principles before laid down, although this treatment should be continued for some days after the cessation of fever, to guard against a relapse.

If hepatic, or other inflammation, complicates these cases, the treatment is rendered more difficult, and the danger is greater, but the patient's condition is by no means hopeless.

Diet.—During the intermissions, I have always restricted patients to light food, as broths, gruels and farinaceous articles; the appetite does not generally crave more. The use of quinine tends to take away appetite for the time.

To me, the food during convalescence has never been an object of great care. The system is seldom greatly reduced in strength and flesh during an attack of fever, consequently the patient soon returns to his ordinary pursuits. Under these circumstances, I have not hesitated to permit him to eat moderately of such food as his appetite has craved. I have seen no injury accrue from such a course.

In case organic disease remain, I have enjoined abstinence from all stimulating food, at least for a time.

Art. II.—*Anesthesia in Surgery. How its dangers are to be avoided.* By Frederick D. Lente, M.D., Surgeon to West Point Foundry.

But a few years since, the astonishing and grateful information was promulgated from Boston to the medical profession and to the world, of the discovery of an agent which was to rob surgery of its terrors, and sickness, to some extent, of its pangs. An extensive trial, promptly accorded to the agent, by surgeons, exceeded their most sanguine expectations; and the anesthetic, sulphuric ether, was, with some few exceptions, put into very general requisition, not only by *surgeons*, in almost all operations, great and small, but by dentists, to some extent, by accoucheurs, and even by the unprofessional, in some cases to allay pain, in others merely to procure the pleasure of an agreeable and speedy intoxication. The discovery of another anesthetic, more speedy and convenient in its application, cheaper, and less disagreeable in its immediate effects, was at this time heralded across the water, soon almost entirely superseded the American anesthetic, and was applied to all the various purposes for which its predecessor had been employed. So far, although anesthesia had been employed without the least fear, and with but little precaution by those skilled and unskilled in its use, no untoward result had occurred or was reported. But, very soon, a death occurred from *chloroform*, then another and another in quick succession. This led to its more careful and restricted use by some surgeons, to its total abandonment by others, but the general mass of surgeons and physicians still continued its use, with more regard, however, to its now admitted danger, and, of course, with more caution in its administration; while the public generally took the hint, and were not so ready to demand anesthesia of the surgeon and dentist for every trivial pain or operation. This checked the increasing mortality from its use; and, for some time, only a scattering case, here and there, in this country and in Europe, appeared occasionally in the journals, the cases generally occurring in public practice.

This state of affairs has continued up to the present time; the individual cases of fatal anesthesia occurring now and then, in the various journals, have gradually added up to a rather alarming sum total. Occasionally, two or three, happening in quick succession, put the profession more on the *qui vive*, and a suspicion is now and then hinted that the aggregate of fatal cases made known to the public does not include an unestimated and perhaps larger number which have happened in private practice, and have been, for obvious reasons, concealed from public scrutiny; so that there is, at this time, an evidently growing distrust of the agent, both in and out of the medical profession, which may soon threaten to banish this "great boon of humanity" from surgery altogether.

In some parts of the continent of Europe, it is stated that the use of anesthetics has been recently regulated by public authority; that chloroform has been altogether abolished in the Massachusetts General Hospital, by its managers; and in other hospitals and public institutions, in Philadelphia and elsewhere, the employment of anesthesia is falling into comparative disuse. We need only a few prosecutions of surgeons—by some of the indignant friends of those deceased from the alleged effects of chloroform, similar to those suits which are now and then instituted for other so-called malpractices in surgery, and which we may look for at any time—to complete the overthrow of chloroform, as well as all the anesthetic agents. A case of this kind was very near happening in the city of New York, as long ago as five years, and with which we became conversant by being acquainted with the party most interested, the husband of the patient, who, laboring under puerperal mania, died suddenly, soon after the administration of chloroform (alleged in inordinate quantity) by her medical attendant. The affidavits of the witnesses were all made and sworn to, and the case on the point of being confided to the hands of a lawyer. It is the object of this paper to ask if there be not some means of arresting this tendency, and of restoring the use of anesthesia, in surgical practice, to the original confidence of the profession and the public, and, at the same time, to suggest a remedy, and a very simple one, too, for this object.

Upon its becoming generally known to and admitted by the profession, that death might result from even the appropriate and cautious use of chloroform, other more safe anesthetic agents were sought for, and numerous substitutes, not necessary to be alluded to here, were introduced and tried, with but partial success. Local anesthesia, both by chloroform vapor and by congelation, as in Mr. Arnott's plan, has also been advised, but so far has not gained much favor with surgeons; so that it appears that *chloroform* is still the agent almost exclusively employed by the general mass of the profession, especially in private practice.*

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So far as we are acquainted with the history of this subject, it was at the New York Hospital alone that the most obvious and simple remedy for the dangers of chloroform was applied, namely, a resort to the original anesthetic of Messrs. Jackson and Morton, of Boston, sulphuric ether. This had been tried in a great number of cases in that institution, and in hundreds of others elsewhere, and without any untoward result, and was only given up for chloroform, as being less convenient and speedy in its application. It was most natural, then, that, after the occurrence of the first fatal case from the latter, its more safe and equally effectual relative should be substituted for it. *Sulphuric ether* has continued to be the principal anesthetic agent in that Hospital, since the period alluded to, some six or seven years ago, and we are not aware that any trouble has since been experienced there in its administration. During our connection with the Hospital, we were in the habit of using it, and seeing it used almost daily, in every variety of surgical cases; and, in private practice and among the patients of the foundry, we are still using it, to the exclusion of any other anesthetic,* and we always find it fully as effectual as chloroform, though not so speedy and convenient, never having met with but one case that resisted its anesthetic influence; and we are fully persuaded that the same result would have happened in that case with chloroform, as the patient was an exceedingly nervous and hysterical female, and was thrown into a violent fit of hysteria as soon as the partial influence of the ether was felt. As the operation to be performed was of small moment, it was considered prudent not to persevere with the ether, or to try chloroform; and we are quite sure that, up to the present time, *no instance of fatal result has been recorded from the use of sulphuric ether.* It is possible that, were this to be used as widely as chloroform has been, some fatal cases might occur, but we think not, for the reason that, with it, *it is impossible to induce full anesthesia so rapidly and suddenly* as with its more dangerous competitor, however freely it may be applied, and we think the only difference in the danger between the two lies in the fact of the suddenness of the effect of the chloroform, an effect occurring sometimes as well from a small as a large quantity,* and not generally to be foreseen or guarded against, even by those most skilled in its use. The manner of administering sulphuric ether is somewhat different from that usually employed with chloroform. To be effective within a reasonably short time, it must be given rapidly, and the access of air cut off as much as possible, the reverse of what is safe with the other agent. The only effective inhaler we have used, or seen used, is a large cup-shaped sponge, sufficient to cover completely the nose and mouth, and covered with a thick folded napkin to prevent undue evaporation as far as possible —there will always necessarily be a sufficient supply of air through the sponge, in spite of all the coverings; into the sponge about an ounce of ether is poured, and, after holding it at a short distance from the face, for the space of half a minute or so, it should be held close to the mouth and nose, and kept there until the full effect is produced, generally two or three minutes. Owing to the rapidity of the evaporation of the ether, it requires to be more frequently renewed than the chloroform; the more abundant the supply in the beginning, the more rapidly will the effect be secured, and the smaller the quantity of the material actually consumed. Generally, we have found two to three ounces sufficient to induce full anesthesia, but if the operation is at all prolonged, sometimes a pint and a half, or it may be a quart, is required; seldom this extreme amount, however. One disadvantage which the ether labors under, and which does not apply to chloroform, is its great inflammability, which only renders caution necessary, when operating under its influence by candle-light; but all danger may be readily guarded against, in this respect, by a little care.

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* It is but just to mention, that we have been compelled to make two or three exceptions to this rule in practice, namely, in cases of obstetrical operations, where we had no assistance save that of old women, and where necessity compelled the use of the most speedy and convenient agent, to meet the urgency of the cases.

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* Cases of death from it are recorded where it was said only ten or fifteen minims were used; whereas, an ounce or more may oftentimes be used with impunity.

Art. III.—*On the Early Application of Nitrate of Silver to the Fauces, in the Treatment of Scarlatina.* By E. Macfarlan, M. D., Williamsburg, N. Y.

The treatment of Scarlatina is as yet by no means well established, and admits of much improvement.

The more severe forms, in which the throat becomes largely implicated, are what I wish more particularly to treat of in this article. Practitioners generally, and all authors, inculcate the idea that blood-letting, general and local, is necessary; at least in many cases in which the inflammation of the fauces and tonsils is severe. Cathartics also are advised.

The plan of treatment that has proved eminently successful in my hands, is one to which I would call the attention of the profession, and which is at least worthy of trial.

From the first, my patients use the warm bath. I continue these for several days, generally till the eruption is on the decline. The throat, as is well known, is, from the commencement of the disease, much involved. By most practitioners, in fact I may say all, no local internal applications are made until the tonsils are much swollen, and even suppuration and ulceration have taken place. I never wait for this state of things; my plan, and the one I believe to be in accordance with sound reason, is to apply a strong solution of argent. nitrat. to the fauces and tonsils at the onset. In every instance, I have succeeded in cutting short the inflammation. In other words, I treat this condition of the throat in scarlatina just as I do an ordinary case of tonsilitis. It was the analogy that led me to adopt this mode of practice. Where the child is old enough to use gargles, I order a simple gargle of bor., soda and alumen sulph. By this mode of practice we prevent suppuration, and ulceration of the tonsils. I give quinine internally when there are signs of debility. Broths, farina, etc., etc. I never use purgatives unless there is constipation. Cold drinks are always grateful to the patient during the fever. In my opinion, they may be allowed in almost every case.

In conclusion, I would call attention to the anticipatory treatment here recommended. I am aware that nitrate of silver has for some time been used in the last stage of scarlatina, or, in other words, when the fauces and tonsils are so much swollen as to render suffocation imminent; and ulceration soon appearing, increases the patient's distress. As above stated, by the early use of the nitrate the inflammation is cut short, and thereby the train of sufferings that would otherwise follow is avoided. I am well satisfied from observation, that if this method of treating scarlatina should become general, there will be far less fatal cases than at present.

Art. IV.—*Epidemic Cholera as it appeared at the Franklin St. Hospital, during the Summer of* 1854. By J. H. Vanderveer, M.D. Physician to the Franklin St. Cholera Hospital.

The disease upon which the following remarks are offered, although one of remote origin, is still shrouded in mystery, and presents a formidable aspect to physicians of modern times.

It is not proposed that these observations should be considered as a scientific treatise on cholera, but simply a plain and brief statement of the cause, preventive, and curative means considered and pursued at the Franklin St. Hospital, during the epidemic of 1854.

The hospital in Franklin St. was opened to receive patients, June 25th, 1854, (although there came under my observation many cases previous to that date, one as early as June 3rd). It was closed Sept. 6th, the last patients being received on August 31st, (the Mott St. Cholera Hospital received patients until October). Whole number received at the Franklin St. Cholera Hospital, 606; whole number died, 255, including those received dead, moribund and dying. Number discharged cured, 351. Whites, 591. Negroes, 15.

Sexes.	No.	Died.	Cured.	Per Centage. Died.	Per Centage. Cured.
Males - - -	310	135	175	.43	.57
Females - -	296	120	176	.40	.60

Condition.	No.	Died.	Cured.	Per Centage. Died.	Per Centage. Cured.
Single - - -	333	113	220	.33	.67
Married - -	162	93	69	.57	.43
Widowed - -	87	41	46	.47	.53
Unknown - -	24	8	16	.33	.67
Total - - -	606	255	351	.42	.58

Nativity.	No.	Died.	Cured.	Per Centage. Died.	Per Centage. Cured.
Scotland - -	9	4	5	.44	.56
Ireland - - -	323	134	189	.41	.59
Germany - -	135	60	75	.44	.56
United States	76	23	53	.30	.70
England - -	28	13	15	.46	.54
France - - -	6	4	2	.66	.34
Isle of Elba -	3	0	3	.00	1 00
Italy - - -	3	3	0	1.00	.00
Portugal - -	1	1	0	1.00	.00
Switzerland -	6	1	5	.16	.84
Sweden - -	1	1	0	1.00	.00
Holland - -	1	0	1	.00	1.00
Norway - -	1	1	0	1.00	.00
Bermuda - -	3	3	0	1.00	.00
South Africa -	1	0	1	.00	1.00
Poland - -	2	0	2	.00	1.00
Unknown - -	7	7	0	1.00	.00
Total - - -	606	255	351	.42	.58

From the above table it will be seen that the greatest number of patients were foreigners; the native born, with but a few exceptions, were of the most degraded class, with constitutions broken down by dissipation, and previous disease. The majority of foreigners had been here but little over five years. The following table, carefully taken at the time, shows the length of residence in the United States.

No. of Patients.	No. of Days.	No. of Patients.	No. of Months.
4	1 "	13	6 "
1	2 "	4	7 "
5	3 "	5	8 "
1	5 "	8	9 "
13	one week	6	10 "
11	2 "	1	11 "

No. of Patients.	No. of Days.	No. of Patients.	No. of Months.
5	three weeks	34	one year
24	one month	50	2 "
25	2 "	39	3 "
22	3 "	23	4 "
9	4 "	21	5 "
4	5 "	195	over five years.
124		399	
		124	
	Total	523	

The following table exhibits the ratio of age and mortality. The greater number received were about the meridian of life, or approaching it, but the greatest mortality being past that period.

Age.	No.	Died.	Cured.	Per centage. Died.	Per centage. Cured.
From 1 to 10 years	16	7	9	.43	.57
" 10 " 20 "	59	26	33	.44	.56
" 20 " 30 "	236	70	166	.29	.71
" 30 " 40 "	139	66	73	.47	.53
" 40 " 50 "	92	48	44	.52	.48
" 50 " 60 "	34	20	14	.58	.42
" 60 " 70 "	14	10	4	.71	.29
" 70 " 80 "	5	2	3	.40	.60
" 80 " 90 "	1	0	1	.00	1.00
Unknown	10	6	4	.60	.40
Total,	606	255	351	.42	.58

The recent epidemic differed in many particulars from that of former years. Previous epidemics were preceded by mild affections of the bowels; the present was ushered in together, the bowel affections keeping pace with the epidemic, and declined in the same ratio with it. Cramps in the extremities were not so severe, in some instances they were entirely absent; in the abdominal muscles the cramps appeared more severe. The consecutive stage was much more obstinate; in the latter respect it differed materially from previous epidemics: a bilious evacuation was then hailed with joy, and the patient considered safe; at present this result was brought about in all those that survived until a reaction could take place.

Table giving the stage of disease Patients were received in.

Stage of disease.	No.	Died.	Cured.	Per centage. Died.	Per centage. Cured.
First or incipient stage, - -	136	6	130	.04	.96
Second stage, - - - - -	56	6	50	.10	.90
Partial Collapse, - - - -	167	67	100	.30	.70
Profound Collapse, - - -	192	128	64	.66	.34
Consecutive Stage, - - -	8	2	6	.25	.75
Moribund, - - - - - -	34	34	0	1.00	.00
Articulo-mortis, - - - -	9	9	0	1.00	.00
Dead (when received,) - -	3	3	0	1.00	.00
Dysentery, - - - - - -	1	0	1	.00	1.00
Total, - - - - - - -	606	255	351	.42	58

On a glance at the above table it will be seen that comparatively few were received in the second stage. Many, fearful of approaching danger, would be sent to the hospital in the first or incipient period; others, more heedless, and with a dread of hospitals, or ignorant of the consequences, would hesitate; while the disease would rush on to the stage of collapse. For example, one of the many instances that occurred was the following:—A woman with her infant was brought to the hospital in the first stage of cholera. After learning that her child could not remain with her, although assured that it would be well taken care of, and freer from danger than in the Cholera Hospital, refused to remain, started off on foot, exposed to the heat of the sun, and in one hour was brought back in a dying condition.

It may be well to add that the whole number treated, exclusive of the dead, moribund and dying, with one case of dysentery, was 560, and of this number died under treatment 209, per centage 37; discharged cured 351, per centage 63, including 192 patients in profound collapse, or pulseless; and of the 209 that died are included those that reacted and died with consecutive fever and other diseases, as follows:

Died with congestion of brain, - - - - - -	35
" consecutive fever, - - - - - - - -	15
" epileptic convulsions, - - - - - - -	1
" dysentery, - - - - - - - - -	1
" phthisis pulmonalis, - - - - - - -	1
" ulceration dependent on secondary syphilis, -	2
Total, - - - - - - - -	55

Making 154 that died of cholera or in collapse. Per centage, 27.

Many of the patients were suffering either from constitutional or primary syphilis, or from gonorrhœa, and many who were considered convalescent had relapses, and died in consequence of syphilitic ulcerations or chronic organic disease.

Among the females admitted, seven were pregnant at periods varying from four to seven months, five died, three undelivered, and two after delivery. Reaction was established in all, one of them having strenuously denied the fact of her pregnancy (being unmarried); labor having set in she immediately relapsed into a state of collapse, and died thirty-six hours after delivery. Of the two discharged cured, one was delivered; the other, being about four months advanced, went on to the natural period of gestation. Among the many complications, the most formidable and alarming were epileptic convulsions; it occurred in five patients—one female, and four males, of which one died. The female had three weeks previously been confined.

The following table exhibits the time that elapsed between the period of admission and the death of patients admitted:

No. patients.	Minutes.	No. patients.		No. patients.
20	30	1	15 hours	19 over 7 days
4	1 hour	4	16 "	3 dead when received
11	2 "	1	17 "	—
8	3 "	3	18 "	22
6	4 "	2	19 "	
8	5 "	1	20 "	
10	6 "	2	22 "	
13	7 "	52	1 day	
2	8 "	20	2 "	
7	9 "	15	3 "	
5	10 "	12	4 "	
6	12 "	7	5 "	
3	13 "	5	6 "	
2	14 "	3	7 "	
105		128		233
	Total,			255

The following table contains a record of the occupations of the patients admitted:

Occupations.		Occupations.	
Laborers	124	Harness Makers	2
Servants	115	Clerks	2
Housekeepers	71	Machinist	1
Seamstresses	32	Book Agent	1
Washerwomen	28	Tin Smith	1
Sailors	34	Carver	1
Carpenters	12	Cabinet Maker	1
Shoemakers	12	Confectioner	1
Farmers	11	Reporter	1
Tailoresses	11	Runner	1
Tailors	9	Horse Trainer	1
Dressmakers	7	Manufacturer	1
Peddlers	6	Soda Water Maker	1
Waiters	5	Packer	1
Blacksmiths	3	Showman	1
Butchers	3	Skinner	1
Cooks	6	Whitewasher	1
Gold Beaters	3	Rail Road Conductor	1
Printers	4	Nurse	1
Sail Makers	2	Cooper	1
Coach Makers	3	Ship Carpenter	1
Barbers	2	Baker	1
Milliners	2	Brewer	1
Painters	2	Saloon Keeper	1
Cupper and Leechers	2	Stone Cutter	1
Porters	2	Trunk Maker	1
Lace Makers	2	News Boy	1
Merchants	2	Rope Maker	1
Hucksters	2	Brush Maker	1
Ragpickers	2	Steward	1
Cap Makers	2	Sea Captain	1
Moulders	2	Gun Smith	1
Masons	2	Unknown	45
Gardener	1		79
Jeweler	1		527
	527	Total	606

The epidemic had evidently reached its climax the third week in July, and it was more fatal previous to that date than after, as will be seen by the following table:

Rec'd from June 25		Died from June 25	
To July 1	27	To July 1	16
" " 8	64	" " 8	35
" " 15	73	" " 15	32
" " 22	85	" " 22	40
" " 29	72	" " 29	33
" August 5	81	" August 5	31
" " 12	65	" " 12	28
" " 19	58	" " 19	19
" " 27	53	" " 27	14
" " 31	28	" " 31	7
Total	606	Total	255

The general appearance and symptoms of the cholera of 1854, as has been previously stated, differed in some respects from other epidemics, although in this disease, as in all others, the symptoms must suffer modifications from peculiarity of constitution, previous condition of health and habits of the patient affected. It has been observed, that such symptoms as indigestion, precordial weight, or oppression, flatulence, slight nausea, acidity, vertigo, headache, griping pains, and diarrhea, separate or combined, are prevalent during an epidemic of cholera. The stools are at first feculent and bilious, the *contents of the stomach* are also of a bilious character. First is thrown off the food, now tinged with bile, until the evacuations become paler, and characteristic of Asiatic cholera, and even the rice water dejections vary in appearance, sometimes tinged with a pinkish hue; others have the appearance of port wine lees; this latter appearance has been generally considered more fatal. I could not observe any difference; some writers assert cases of cholera that have died without either vomiting or purging. I should decide it to be no case of cholera, and in fact, I have yet to learn of a patient's dying with cholera, without vomiting or purging. There were several patients received in a dying condition, who neither vomited nor purged after admission, and their relatives who accompanied them stated positively that they had not previously; but what did the autopsy reveal? not a particle of food in the stomach, or fœcal matter in the intestines: one case in particular, where nothing was passed after his reception in the hospital, with the same assurance from his friends, his abdomen was found to be enormously distended, and upon examination, we discovered the stomach and whole intestinal canal distended with rice water, but not a particle of fœcal matter. The sphincter ani was so firmly contracted, that the finger was with difficulty passed in the rectum. It is evident, in such cases, that vomiting and purging take place so rapidly that the alimentary canal frees itself of its contents. The muscular action of the bowels becoming exhausted, the peristaltic action of the intestines ceases, the sphincter ani contracts, and hence the collection of fluid. In some patients all the symptoms of cholera would be present, except cramps; it frequently occurred, that patients would pass through all the stages of cholera without the least pain. In quite a large proportion, the head was seriously involved; many cases in this condition were attributed to previous treatment, such as the essential oils, hot drops, tinct. opii, &c., &c. In many, it was evident from the odor after vomiting, also from prescriptions and vials found on their persons. The speedy determination to the head was peculiar to the epidemic, and I believe many valuable lives were lost the past summer, by a too sudden check being given to the secretions, even where cholera was not fully established. The pupils in the greater number of cases were contracted; the mammary secretions were uninterrupted, and quite as copious during the attack as previous. The infant of one patient was brought to the hospital twice a day to nurse, until the mother recovered.

Perhaps it would be well to offer a few remarks on the consecutive fever. To watch a patient, in collapse, anxiously, and to see the unpleasant symptoms, one after another, pass off, is gratifying. We now have reason to hope, but are often doomed to despair. The patient has escaped one class of dangers, but meets others quite as formidable as the first.

The stools generally were consistent, dark green, or black; in some cases the secretion of urine took place with reaction, in others it did not so soon, but quite as often in the former as the latter, but not copious. Other cases would appear to be doing well, but suddenly relapse, and die. In some instances the form of fever would appear as typhus, but comparatively few. Generally, the tongue would be clean and moist; pulse either at or below the natural standard; pupils in this stage always contracted; the conjunctivia clear; vessels not congested; no desire for food; no unnatural thirst; skin shriveled, dry and husky; temperature of head natural; the patients would lie in a sleepy stupor, and their only wish was not to be disturbed. Arouse them, and ask them how they were, they would invariably answer, "First-rate, would like to have a good sleep." It was in this stage that singultus often occurred, which was very annoying to the patient. The disease did not appear to have any effect on the catamenia; in a number of patients, past the age of thirty, it was profuse, in one while in collapse; one female, who had been irregular at several periods, had a vicarious menstruation from the gums, corresponding with three of the upper incisor teeth; there were three different attacks at intervals of two or three hours; the patient became quite exhausted; in order to check it we had to apply a compress and cold applications.

There has been much speculation in relation to the hour of attack and death. The hour of death can readily be ascertained; but the hour of attack cannot. We are obliged to rely on the statements of patients, or their friends; in this there is no certainty. There might be two patients taken precisely at the same time, and, very likely, each one would date the time differently. In receiving patients at the Franklin-street Hospital, we noticed a greater influx of them from 11 A. M., until 11 P. M., and from the nature of the disease it is quite natural it should be so; they would more likely be stricken down when exposed to the heat and fatigue than when cool and at rest. We also noticed a greater increase after a sudden rise or fall of the thermometer, either with or without a fall of rain.

There have been many theories in relation to the progress of cholera, contagiousness of the disease, and cure. I took considerable pains to note down the more recent arrivals of emigrants, the ship's name, and port sailed from, as follows:

Ship's name.	Port sailed from.	Date of arrival at New York.		
Rostede, 3	Bremen,	May	1,	1854
Eliza,	Hamburg,	August	16,	"
Amazon,	Turk's Island,	"		"
Empress,	Sunderland,	"		"
Mississippi,	Genoa,	"	15,	"
Isaac Webb,	Liverpool,	June	10,	"
Sheridan,	"	August	16,	"
Sea Nymph,	"	July	25,	"

Ship's name.	Port sailed from.	Date of arrival at New York.		
Patrick,	Liverpool,	May	25,	1854
Carl Hershell,	Hamburg,	August	15,	"
American Union,	Liverpool,	"	"	"
E. D. Stanley,	"	"	21,	"
Isabella,	Havre,	September	20,	"
Ashburton,	Liverpool,	April	26,	"
Neptune,	Hamburg,	May	23,	"
Oswego,	Liverpool,	August	29,	"
Rome,	Antwerp,	"	8,	"
Clementine,	"	May	21,	"
Tornado, 2	Liverpool,	July	20,	"
Orpheus,	Bremen,	June	29,	"
Pemberton,	Cork,	July	31,	"
Spark of the Ocean,	Havre,	April	23,	"
John Hancock,	Liverpool,	February	"	"
Corinthian,	Antwerp,	May	20,	"
Vater Grunner,	Bremen,	July	"	"
Charles Hill,	Havre,	May	19,	"
Columbia,	Liverpool,	July	8,	"
Aspheus,	Bremen,	June	29,	"
Progress,	Liverpool,	May	28,	"
American Congress,	London,	April	21,	"
Budget, 2	Bremen,	July	12,	"
Catharine Augusta,	Antwerp,	"	29,	"
Rocinus,	Liverpool,	May	16,	"
Robert,	Bremen.	August	4,	"
Jordan,	Liverpool,	"	8,	"
Admiral,	Havre,	"	19,	"
Peter Hatrick,	Antwerp,	May	16,	"
Canalus,	Havre,	June	13,	"
President Smidt,	Bremen,	January.	16,	"
Bajapore,	Liverpool.	June	29,	"
Isabella,	Havre,	April	4,	"
Eleanor,	Limerick,	May	23,	"
Wm. Henry Hasbrook.	"	April	20,	"
Western Empire,	"	June	23,	"
Lincea,	Liverpool,	July	9,	"
Bremen,	Bremen,	May	23,	"
Guttenberg,	"	"	24,	"
Webster,	Liverpool,	June	29,	"
John White,	Antwerp,	May	11,	"
Brother Jonathan,	Havre,	July	7,	"
Agnes Litz,	Liverpool,	May	23,	"
Sir Isaac Newton,	"	January	24,	"
Continent,	"	May	22,	"
Empire State,	"	March	2,	"
Regulus,	Bremen,	July	21,	"
Rhine,	"	June	30,	"
St. Nicholas,	"	March	18,	"
George DuKwitz,	"	May	11,	"
Suwarrow,	Havre,	July	24,	"
Wm. A. Cooper,	Antwerp,	May	24,	"
Senator,	Liverpool.	April		"
Total,	61			

It has been stated that the epidemic cholera of 1854 made its first appearance in Asia, 1851, and thence to Europe, 1852 and 1853, especially in the Germanic States, and statistics show that the large sea-port towns suffered severely.*

Now, if cholera is so very portable or contagious as to follow the emigrant and his baggage to America, and show itself wherever he shapes his course, or makes his stopping-place, why did it not appear here before the summer of 1854 ? Certainly there was quite as large an emigration in '52 and '53 as in '54, and from some of the identical ports affected. It will be seen by the above table that out of sixty-one vessels arriving at this port, there came to the Hospital sixty-five patients; being *three* from one, and two from two others, leaving one only from each of the fifty-eight remaining vessels. It is true there may be localities where its ravages are more fearful than others; and persons traveling from such places being attacked on the road, or at their journey's end, does not prove that it is portable or contagious. We received from some dwellings greater numbers than from others ; but every physician knows that there are places that might be termed hot-beds, fit to nurture any disease, that might be prevalent at the time. In former epidemics it appeared to follow the water courses, sea-port towns, large rivers, and their tributaries. The past summer it took a wider range, and spread further in the interior. The distribution of the disease in the city was pretty general, commencing in the lower part of the city, and working northward and eastward. The following table gives the number from each ward:

Number from each ward.		Number from each ward.	
1st Ward	48	10th Ward	5
2 "	12	11 "	10
3 "	22	12 "	1
4 "	64	13 "	9
5 "	55	14 "	12
6 "	112	15 "	7
7 "	25	16 "	10
8 "	13	17 "	15
9 "	10	18 "	24

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* See *New York Journal of Medicine*, Nov., 1854.

Number from each ward.	
19th Ward	12
20 "	6
From Commissioners of Emigration	18
From Vessels in port	17
" Ward's Island	2
Strangers not belonging in the city	35
From New York Dispensary	8
Unknown	54
Total,	606

It will be readily seen, that the greater numbers came from those wards where are located the most tenant houses, with less regard to ventilation, or infested with those brothels of filth and degradation, as the Five Points.

I should think the following would satisfy any contagionist that the disease is not communicated from one to another. The Hospital building was small, but two stories high. The first floor and male ward was 25 feet by 35, which contained at one time, when the disease was at its height, 25 patients. The second floor and female ward was 25 feet by 30, and also contained at the same time 25 patients. The sleeping apartments of both nurses and physicians were in direct contact with the wards of the patients, the doors and windows had necessarily to be thrown open that there might be a free circulation of air throughout the rooms, and for a week or more, when the wards were crowded, the attendants had to sleep as they could catch a nap on the next bed to a dying patient. The yard in the rear of the Hospital was enclosed by a wall 12 feet high, the size was 20 feet by 30; it was used as follows: one end was taken up by water-closets, one part was set off for cooking, or, in other words, used as a kitchen, one part as a wash-house, another, about 8 feet by 10, to examine patients in after death. We examined 78 patients, the most of them very minutely. We punctured our hands frequently, and had them imbrued in the fluids without any bad results following, and in order that no part of this small piece of back ground should be unoccupied, the remainder of what has been disposed of above was used as a deposit for the dead, until removed by friends or the dead-cart. There were always more or less there, for six hours at a time, and in one instance there were piled up ten coffins, exposed to the rays of a summer's sun ten hours, until they became so offensive that the attendants could scarcely endure it. We numbered at the hospital 20 persons, physicians, nurses and attendants, and but one died with cholera. The others enjoyed good health, without any symptoms of cholera throughout the time they were engaged. The man who died was a *Swiss*, employed as a sedan carrier to bring patients to the hospital, of temperate habits, used to drink large quantities of soda water. He complained one day that the work was too hard for him and that he would like to leave: permission being granted, he went; five days after he was brought to the hospital in a dying condition. Examination after death found the lungs adherent to the pleura, nearly in their whole extent, and tuberculous.

Morbid appearances observed after death.—Apart from the usual external appearances, in many the skin showed patches of ecchymosis; and this was not strictly confined to the skin, it frequently showed itself in the abdominal viscera. Among the appearances we met with, unconnected with cholera, which were numerous, may be mentioned tumors, old abscesses, ancient thickening and osseous productions of the membranes, diseases of the heart, lungs, and blood-vessels, morbid lesions of the liver, gall-bladder, spleen, kidneys, uterus, and of the stomach and bowels. Diseases of these organs we saw in almost every case, either singly or combined, and of which we selected some valuable specimens. It would seem from this, let the cause be what it may, cholera more generally selects diseased subjects for is victims. Of the above named organs involved, the lungs and kidneys predominated, the former more generally from pleuritic adhesions, tubercles, abscess and hepatization; the latter from softening and fatty degeneration. Of the 78 autopsies made, I have nothing new to add. With but few exceptions, we saw what was seen and spoken of years previously, from the head to the feet, the whole system highly engorged with dark blood, blood-vessels, substance of the brain, abdominal viscera, &c., &c. Perhaps the collection of serum in the ventricles of the brain may have been greater. I do not remember of seeing it stated before, but we found in several instances three ounces of serum in the ventricles alone, independent of what was collected between the pia and arachnoid membranes and in the cranium. The pituitary body presented no marked deviation from its normal appearance. The gall-bladder we generally found greatly distended; in one instance it measured six inches in length, six inches in circumference at the middle, and six inches and a quarter in circumference at the base (the specimen is in my possession). The effusion of serum was found in greater abundance in those that died in collapse, the distended gall bladder in those that died in the consecutive stage. The dissolved and fluid blood, as has been spoken of by writers on this subject to always or generally exist, did not hold true with us. In those that died in collapse, we found the fibrinous clot and coagulated blood to exist in the right cavities of the heart in as great a per centage as otherwise. The generative organs, both male and female, in at least two-thirds of the cases examined, were in a frightful condition from the effects of the venereal disease. The mouth of the womb universally contained a plug of mucus, and all the other viscera presented the general and usual appearance of those dying of cholera.

Prevention.—How shall we prevent the ravages of this terrible scourge? The first method we shall consider will be general—the second personal. In our large towns and cities, every species of fermentative and putrefactive matter should be removed, and its accumulation prevented. The decomposition of animal and vegetable matter, which is constantly taking place in the warm season in our cities, contributes greatly to disease, and this will continue to increase until a complete system of sewerage is effected. For example: both animal and vegetable matter is collected in the street gutters; a hydrant in an alley-way is leaking or left running water at times, more or less; the rays of a summer's sun cause its evaporation, and the noxious effluvia is constantly disseminated in the atmosphere; such being the effects of a collection of stagnant water. All the water from hydrants and roofs of houses should pass off in sewers. This, I consider, would add greatly to our health in summer, and convenience in winter. Another great evil exists in our cities, for instance, the custom of building tenant houses. We find them with an alley-way from twenty-five to one hundred feet in length, passing in the rear. We then see buildings from four to six stories high, with low ceilings and small rooms, containing from one hundred to one thousand human beings, and no chance whatever for the circulation of fresh air,—in fact, they live in a sort of labyrinth; and, like the Pontine Marshes, seldom a stranger passes through its winding portals, but he comes out tainted with the miasm it generates. The personal preventives are cleanliness and strict attention to diet, regularity, a stated hour to eat and sleep, guarding against an excess in either; a moderate use of all things; fruits and vegetables should be proscribed, on account of their predisposition to acidity and flatulence; although, I believe, if fully arrived at maturity, and not injured by exposure to the sun, or become stale, that certain fruits and vegetables are harmless. Soups, properly made of beef or lamb, with rice or macaroni, beef steaks, tender ham, boiled eggs, corned beef with boiled rice, and macaroni, unfermented bread, crackers, or ship biscuit, is the best. The disease was evidently hastened in many that came into the hospital by eating crude vegetables and fruit, stale meats, etc.; particles of the same were found in the stomach and bowels of some after death, who had died in collapse, such as half-grown potatoes and pine-apple. As is generally the case, during the prevalence of this disease—a disordered state of the stomach and bowels, without enumerating all the premonitory symptoms—many are in the habit, as soon as a little looseness of the bowels commences, to resort to a stimulant or anodyne, although very convenient at the time, eventually proves highly injurious. I recommended and used an alterative pill, composed of mass. hydr., comp., ext. colocynth, and Ipecac., taken occasionally at bedtime.

Treatment.—The treatment pursued was the mercurial, in the fullest acceptation of the term, in all stages of the disease. It is singular, though no more singular than true, to see some practitioners administering one and two grain doses of calomel combined with opium and lead, at intervals of half, or every hour, and very likely it may reach the stomach, though doubtful,—admitting it does, the constant exhalation of rice-water that is taking place in the active stage of cholera, and in consequence, the constant emesis, what chance is there of its remaining there, even if it should be given thus combined? The more taken, in my estimation, the worse they are off; taking one set of remedies to counteract the other—the already torpid and sluggish secretions being still more paralyzed by the opium. Some are very much amazed and frightened if you tell them to give a large dose of calomel alone. "Why," they say, "you will purge your already exhausted patient to death." Now I have generally found calomel slow in its action as a cathartic; in large doses more sedative in its effects, and its cathartic action does not increase in proportion to the increase of the dose. Our main object was, if possible, to mercurialize the patient, and I have never seen one die with cholera, where this object was effected. Of the whole number treated in the hospital, there was not a death or a relapse, where ptyalism was produced; the consecutive stage of fever was easily managed, and from the effects of these "hazardous doses of calomel," as some stigmatize them, only three proved at all tedious.

The second intention was to keep the patients quiet and composed in bed, to apply mustard externally and the hot-air bath, to keep them closely covered with a woolen blanket, and to give them powdered ice *ad libitum*, and not a particle of water until reaction was fully established.

In the first stages of cholera we gave from thirty-five to forty grains of calomel, and applied a mustard sinapism over the whole chest and bowels, from the sternum to the pubes, placing the patients in bed, covering them with a blanket and applying the hot air underneath to the extremities, (this was conveyed from an alcohol lamp through a tin tube) though not pleasant to the patient at first, soon had a soothing effect and had a greater tendency to relieve the cramps than any other means used. In fact, we would not admit of any friction whatever, believing it more injurious than otherwise. In using friction, you cannot do so without exposing the patient to currents of air, more or less; and when this constant exhalation is going on, evaporation must take place, and, in consequence, produce cold; and, not only taking this view, consider, for instance, a patient with one assistant to each limb, rubbing with might and main, what chance have they for rest and quiet? I have seen patients nearly flayed of their epidermis by friction. In a few instances, patients having always heard of and seen friction used in cholera, persisted in having it used on themselves; but we invariably found the cramps more severe. Whenever patients were admitted, they were proceeded with as described above, and given in charge of a nurse, with strict orders to keep them quiet,—the heat well applied and closely covered, not to allow them to rise up in bed or use any exertions whatever. Being kept in this position for a short time, the surface began to dry and heat return to the extremities. If they rejected the first dose of calomel it was repeated, not waiting for one hour or half hour to elapse, but in five minutes, and so on until emesis ceased, or we saw some signs of the medicine, or judged a sufficient quantity had been retained in the stomach to proceed at regular intervals with diminished doses. If a stimulant or anodyne was indicated, we used the following

℞. Chloroform.
Sol. Morph. (Majend.,)
Tinc. Camph. (Sat.,)
Syrup Simplex, aa partes æquales, (fluid meas.)
m

Of this, a teaspoonful was given in a tablespoonful of brandy or simple syrup, as the case demanded, at intervals of half an hour, if necessary to allay irritability. This had a happy effect, with the other means used, to assist the vomiting and quiet the irritable state of the system, and for that purpose only was it intended. In a few instances we had recourse to stimulants, independent of this, but found it necessary to use them cautiously, and watch their effects, and in using them we found great advantage in consulting the habits of patients. For instance, the German could not endure brandy —as a general custom he is used to drinking wine and beer, and the peculiarity seemed to cling to him in disease: we therefore took advantage of this, and gave the German wine and the others brandy when indicated, and found it to answer a better purpose.

We have now arrived at the stage of collapse, wherein the vital powers are completely prostrated by the disease being fully formed, the action of the heart nearly ceases, there is no pulse at the wrist, skin cold and clammy, and all the urgent symptoms present in cholera fully developed. Here action is called for at once; what, in ordinary diseases, we take hours and days to accomplish, must now be done in minutes; there is great torpor and want of excitability, blisters will not act, sinapisms do not produce their usual effect, the skin is apparently dead, internal stimulants you cannot use with safety, and the only species of medicines that can be used, are such as will stimulate and restore the secretions: this we find in calomel—its action is first alterative, then cathartic; by its altero-stimulating action it relieves the pressure, and enables the system to rally sufficiently to sustain the subsequent action of the medicine. Patients coming in during this stage of disease or verging on it, we gave 60 grains of calomel, and if they vomited very soon after, and the medicine could be detected in the vessel, we did not wait, but repeated the same quantity at once, and so on, until the third or fourth dose was administered; if they did not vomit, and the rice water dejections ceased, one dose would suffice; in connection with the means used in the first stages of the disease, we usually continued the large doses until the urgent symptoms were past, which usually did not require more than the fourth dose, but still continued the calomel for 12, 24, or 36 hours, diminishing the dose, and increasing the interval, as the existing symptoms would seem to indicate. As has been stated before, many are fearful of purgation, from the effects of so large doses of calomel. I can say to all that are timid in this respect, with confidence, that I have never met with a case of cholera, treated as above stated, and hypercathartis ensue; on the contrary, it has frequently occurred, that patients, both in the hospital and private practice, have been seized with violent vomiting, purging, and cramps, which had, from their own statement, been kept up every ten minutes, for one, two, and three hours; after taking 60 grains of calomel, have not vomited or purged in three, six, to twelve hours after, and in two or three instances in the hospital, after waiting twelve hours, resorted to mild enema to open the lower bowels. It is not a general thing for purging to subside so soon; we have more frequently to follow up the medicine. In the first stages we have more cathartic effects from the calomel, though given in smaller doses; the vital power is not so dead to the action of remedies. Some speak highly of enemas of laudanum, anodyne suppositories, &c., &c.: we tried them in a few cases, but found it like throwing chaff against the wind; probably before or by the time we had completed the operation, it was thrown back with greater velocity than it was placed there. I believe it entirely useless to annoy the patient with any thing of the kind, in the active stage of cholera. If the disease was located in the lower bowels, it might be beneficial; but consider the great quantity of fluid collecting in the stomach and upper portion of the alimentary canal, constantly pushing down on the lower bowels and sphincter ani, and what chance, indeed, has it to remain there long enough to relieve the patient? This would be treating a symptom, not the disease. We gave several cases, in combination with the calomel, sulph. quinia, but found no benefit from it, and, by the suggestion of some of our practical friends, were induced to combine with it *tannin;* in this, as in the former, we were disappointed, could see no advantage whatever arising from it, and, if any thing, detrimental; the irritability of the stomach was not as easily controlled as when giving the calomel alone: we had recourse to venesection in one patient, a female; she sank under the operation and died shortly after. This was the extent of our variation from the general treatment commenced at first, and even in this we did not lose sight of the calomel; we made that our sheet anchor from first to last, and had no cause for regret. Had we in our hospital building possessed the advantages of some other institutions, our per centage of cures might have been much greater; but, unavoidably, it was otherwise. As I have previously stated the dimensions of the building, it only remains for me to say that we were necessarily compelled to place the dying, the critical, and the convalescent in the same ward together, which had an unhappy effect on the patients, females more particularly. The female ward was in the attic story, which caused it to be much warmer; as at midday the rays of the sun falling directly on the roof, and although the per centage of deaths is nearly the same, it should not have been so; evidently many of the female patients at times were doing well, and there was nothing to prevent their recovery, had we been provided with a cool ward for the convalescent.

The following table exhibits the range of thermometer in the lower ward taken three times a day, commencing July 17 (the papers containing the previous dates having been mislaid or lost). The upper or female ward, when the sun was out, ranged 8 to 10 degrees warmer than the lower ward, which caused it to be much more oppressive to the patients.

We did not offer the patients any nourishment in the active stage of disease, the mere sight of it would appear disgusting to them. I believe any cause to disturb the mind or body in cholera is detrimental, and I see no earthly good to be derived from it in this stage of disease. Pounded ice, about the consistency of snow, appeared to relieve the burning heat in the stomach, so much complained of, more than any thing used. They really considered it a luxury, when told they could have as much as they wished. Too much stress cannot be placed on keeping the patient quiet and composed in cholera; the mere turning in bed, rising up to take medicine, throwing the arms out from under the covering, flexing the limbs violently, and extending them, all predispose to cramps, and increase the irritability of the stomach and dejections from the bowels.

DATE.	8 A.M.	12 M.	8 P.M.	DATE.	8 A.M.	12 M.	8 P.M.
July 17	71	78	70	Aug. 9	72	76	70
" 18	76	83	80	" 10	70	74	68
" 19	78	87	79	" 11	72	78	70
" 20	81	93	86	" 12	74	80	72
" 21	80	92	87	" 13	78	88	76
" 22	80	87	80	" 14	76	82	73
" 23	80	88	76	" 15	74	80	70
" 24	76	80	70	" 16	73	81	72
" 25	78	82	71	" 17	74	78	73
" 26	80	88	76	" 18	70	76	68
" 27	76	80	78	" 19	73	78	70
" 28	76	82	74	" 20	72	81	69
" 29	76	79	72	" 21	76	81	72
" 30	77	84	76	" 22	76	91	75
" 31	76	82	72	" 23	72	74	69
Aug. 1	78	85	76	" 24	74	82	70
" 2	80	87	79	" 25	78	88	74
" 3	78	83	77	" 26	78	87	74
" 4	76	84	74	" 27	72	80	69
" 5	76	83	76	" 28	71	80	68
" 6	76	86	70	" 29	69	76	67
" 7	70	73	69	" 30	70	78	66
" 8	68	76	65	" 31	68	70	63

No purgative is called for: after the calomel we were in the habit of administering a mild enema to assist the bowels, if they did not move in twenty-four hours, and reaction had been fully established, and also where the effects of the mercury was showing itself on the system and reaction satisfactorily established, we gave sulphur in doses sufficient to act as a cathartic. The diet should necessarily be light in convalescence—the stomach is still very irritable, and must not be overtaxed—it should consist of arrow-root, tapioca, etc., and it should be given in small quantities at short intervals.

The sweet spirits of nitre, given in the first stages of convalescence, has a marked effect in restoring the secretions of the kidneys and healthy action of the skin. Tonics are seldom called for, except in the advanced stage of convalescence of the aged and naturally feeble constitutions.

In the consecutive stage of fever is required a judicious course of treatment. Here the judgment of the practitioner is called in question more than in the active stage of cholera. Here, as in the first stage of cholera, the same symptoms vary according to previous habits and peculiarities of the patient, and the treatment has to be adapted accordingly. Some cases terminated in confirmed typhus and were treated as such, combatting local inflammations by cupping, blisters, etc., etc. In the consecutive stage where mercury was needed, we gave mass. hyd. spts. mindereri with spts. nit. dulce., and all those that terminated in dysentery we gave the astringents, as lead, opium, and tannin, anodyne suppositories blended with the butter of cocoa, with great benefit, at the same time treating the general fever on general principles.

From the foregoing, it would be supposed that I am a strong advocate for the excessive use of mercury, and it might be inferred, in all diseases and at all times: far from it; I am opposed to its indiscriminate use, and think it injurious; but in a disease like cholera, I believe it the only medicine that will overcome and promptly subdue it.

The foregoing observations are composed, as taken from patients or those that accompanied them to the hospital, of incidents that occurred previous to their arrival, that we might arrive at facts in relation to the commencement, duration, symptoms, and previous treatment, discarding any thing equivocal, or in the shape of reports. Our object is to reveal all in our power and be correct, by stating what occurred during the epidemic in the hospital—watching by the bedside of the sick and dying, to accomplish it—the treatment pursued, the statistics as revealed, leaving the results, as compared with other institutions, to the consideration of the profession.

I cannot conclude these remarks without rendering a merited tribute to Drs. C. A. Budd and Richards, who were associated with me in the medical staff of the hospital, and who ably and zealously endorsed all my efforts,—the former rendering marked assistance in post-mortem examinations, and the latter in microscopic observations.

To the commissioners of health I beg leave to acknowledge my great obligations, for the promptness and liberality with which all my requisitions were supplied.

ART. V.—*Is Cholera invariably preceded by Premonitory Diarrhœa?* BY JOSEPH C. HUTCHISON, M. D., of Brooklyn, N. Y.

IN the last number of the *New York Journal of Medicine* there was a communication from Dr. Macloughlin, of London, in which he endeavors to prove that the six cases detailed in my Monograph on Cholera,* showing that this disease is not always preceded by diarrhœa, are not really exceptions to the rule laid down by him, "*that cholera is invariably preceded by a diarrhœa for a few hours, a few days, or a few weeks.*" He, indeed, declares that I have, by my "own showing, proved that these six cases had a premonitory diarrhœa."

Dr. Macloughlin's pamphlet,† in which the above rule was enunciated, was received by me last summer during my term of service as physician to the Brooklyn Cholera Hospital. On referring to the note-book, I found that in several cases it was recorded that premonitory diarrhœa had not existed. Previous to this time my attention had not been *very specially* directed to the question, and, as the above unconditional and unequivocal opinion of Dr. M. seemed to be based on extensive and apparently careful observations, I was induced to suspect that a more rigid inquiry into the histories of those cases might have resulted in the confirmation of his statements. The inquiry was, therefore, commenced *de novo*—certainly with no determination or even desire to arrive at conclusions different from those maintained in the pamphlet to which reference has been made, and no efforts were spared, no source of information neglected, that could be made available, to ascertain, in every subsequent case in which premonitory diarrhœa was said to have been absent, whether the statement was correct or not. The result will, I think, convince every candid inquirer, who has any faith in medical testimony, that Dr. Macloughlin's rule is not without exceptions.

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* See *New York Journal of Medicine*, January, 1855.

† *Result of an Inquiry into the Invariable Existence of a Premonitory Diarrhœa in Cholera.*

I propose, in the first place, to show that Dr. Macloughlin's definition of cholera and premonitory diarrhœa differs widely from my own and from that of generally recognized authorities, and that, in reality, this difference in the use of terms employed will account in some degree for the issue between us; and, secondly, to re-produce the reports of the six cases which form the basis of my conclusions in connection with his replies to each, and to add such comments as his objections necessitate.

It is regretted that Dr. Macloughlin's answer is not free from the charge of ambiguity; and that I may not misinterpret him, which I would sincerely deprecate, I will quote freely from it, in order that the reader may decide whether the Doctor has been properly understood. The following extracts contain, I think, his definition of premonitory diarrhœa, and also, by implication, of cholera:—

"It is the time which elapses from the first liquid evacuation to the first cramps. This is called the premonitory time, and all the evacuations which occur during that time constitute the premonitory diarrhœa." * * * * * *

"Often we find that persons who are laboring under painless diarrhœa do not believe themselves ill, because they have no pain; and we find them walking about for amusement, or for business, or employed in-doors at their usual occupations, with the cold, cyanic state of the skin, and with the cold, clammy dew of death all over their body, *the heart having ceased to beat, and the blood to circulate.* And yet these persons will say that they are quite well, that they feel as strong as ever, except, possibly they may add, that they cannot speak so loud as usual; and possibly in a few minutes after, these persons are struck down by spasms, vomiting, etc., and cease to breathe in three, four, or five hours after, to the astonishment of all who are not aware of the insidious advance of the disease."

Dr. Macloughlin's experience in the observation of cholera has been rather remarkable. It would be a phenomenon, to see persons walking about at their usual occupations, "with the cold, clammy dew of death all over their bodies, *the heart having ceased to beat, and the blood to circulate,*" and yet informing us "that they feel quite well, and as strong as ever." This statement I supposed might be a typographical error, or a *lapsus pennæ*, until I saw it repeated in a pamphlet just received from Dr. M. As he complains that my cases were not reported with sufficient care, I may be pardoned for saying, that the *minute details* of cases so unique as those above described would have been equally desirable.

From the above quotations, and others which will appear hereafter, we infer, that, according to Dr. Macloughlin, diarrhœa becomes cholera as soon as cramps are developed, and not until then—that cramps are an indispensable symptom, a constant characteristic of the disease—that, indeed, no other symptom is half so distinctive, not even the cold, cyanic state of the skin, etc. The case may have advanced so far that the heart has ceased to beat, and the blood to circulate, and still the patient is only in the premonitory stage of the disease, for *spasms* have not yet occurred.

I will not stop to quote opinions in favor of the position that spasms are not pathognomonic of cholera, although plenty of them are at hand. It is sufficient to state that the generally recognized authorities on the subject of cholera agree that cramps are merely a usual, one of the most striking, but a non-essential symptom, whose absence would not in the least affect the diagnosis of the disease.* And I will venture the affirmation that there is no one, who has seen much of cholera (except Dr. Macloughlin), that has not witnessed cases run their whole course to a fatal termination entirely without this symptom.

As Dr. M. makes the choleraic stage commence with cramps, an opinion peculiar to himself, it is evident that the controversy into which I have been drawn is based, in some degree, on a distinction without a difference. For I understand, when an individual, (previously in perfect health, and free from diarrhœa), is suddenly attacked with vomiting and purging, attended with a degree of prostration which bears no relation to the severity of the discharges, and followed soon afterwards by collapsed countenance, a cold and blue state of the skin, etc., that he has been attacked with cholera, without premonitory diarrhœa, *whether cramps be present or not*, and the cases which I have detailed as cholera without premonitory diarrhœa, are called so in accordance with the above definition.

I proceed now to place side by side the reports of my cases,† with the objections to each presented by Dr. M.

"Case 1.—*Admitted September* 1*st*, 1854. Sarah Y., aged 33, attacked with vomiting and purging a 'thin, watery fluid,' at 7 o'clock this morning, and cramps half an hour subsequently. She states that she felt perfectly well up to this time, and had no premonitory diarrhœa, which was further confirmed by the testimony of her husband. *Symptoms*—Vomiting and purging, excessive thirst, livid appearance of the face, thready pulse, skin cool and covered with a clammy perspiration, suppression of urine. Death in 27 hours."

It is objected to the above case, that as the discharges were said to have been a thin, watery fluid, and as it is not stated whether fæcal matter was or was not present in the evacuations, therefore the fæcal matter must have been washed away by previous evacuations, i. e., by diarrhœa.

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* *Researches on the Pathology and Treatment of the Asiatic or Algide Cholera.* By E. A. Parkes, M. D. Lond., 1847, p. 94. Dr. Budd on Cholera in *Lib. Pract. Med.* Tweedie. Am. Edit., Vol. iii., p. 101. Barnwell, *on Asiatic Cholera.* Lond., 1853, p. 57. *Report on Cholera in Paris in* 1832. By Dr. Jackson of Boston.

† See *New York Journal of Med., January*, 1855.

I reply, 1. That, for the description of the character of the discharges before the admission of the patient into the hospital, we were necessitated to rely on the statement of herself and husband, and it cannot be presumed that they would examine a discharge so as to state all its peculiarities as a physician would. There probably was fæcal matter in the first discharge, but, that its general character was thin and watery, so that this peculiarity alone arrested *their* attention, there can be no reasonable doubt, nor can it be surprising. It cannot be objected that the admission, that there may have been fæcal matter in the first discharge, proves that the patient may have had a premonitory diarrhœa; for the interval between the discharges is often not greater than five minutes, and if there was fæcal matter in the first discharge, as well as a thin, watery fluid, there may have been none in that which may have occurred five minutes subsequently. And, it cannot be said that the patient had a premonitory diarrhœa for five minutes, for this "invariably precedes cholera for a few weeks, a few days, or a few hours."

2. It may be stated, in addition to the above history of this case, that it came from a house in which a number of deaths had occurred from cholera, and as the family in which this case occurred were persons of considerable intelligence, they were on the look out for premonitory diarrhœa; and it would have been remembered had it occurred, especially, when their attention was subsequently directed to it by particular inquiries.

3. This patient may have had a healthy fæcal discharge a short time before the above attack. This is by no means impossible, and if so, would there not have been almost, if not entire absence of fæcal matter in the first choleraic discharge?

" Case 2.—*Admitted September 2d*, 1854. Sarah J. Y., daughter of preceding patient, aged 8 years, attacked at 1 o'clock this morning, with severe vomiting and purging. By careful inquiry of herself and father, it cannot be ascertained that premonitory diarrhœa had existed. *Symptoms*—Vomiting and purging, intense thirst, cold and cyanic state of the skin, feeble circulation, husky voice, and suppression of urine—no cramps. Death in 66 hours, from congestion of the brain."

The reply to this case is, "That the existence of a (premonitory) diarrhœa cannot be doubted." The writer has omitted to furnish a reason for this opinion. He also declares that, "as Dr. Hutchison has not told us whether he had or had not carefully watched, or caused to be carefully watched, whether the fingers or toes were or were not suddenly contracted by spasms, and as suddenly relaxed, it cannot be admitted that he is authorized to say that his patient had no *spasms*, and that, therefore, it was a case of cholera, without a premonitory diarrhœa, and without spasms."

It might, with equal propriety, have been denied that the patient was 8 years old, because it is not stated how this fact became known, whether from herself, her parents, or the records of the family bible; or that she had cholera at all; but, as it is admitted to have been a case of cholera, it is inferred that there *must* have been a premonitory diarrhœa, and, for the same reason, there *must* have been spasms, "but no care was taken to ascertain their existence." In other words, the objection amounts to this:—Cholera cannot exist without premonitory diarrhœa and cramps; therefore, as this was a case of cholera, these two symptoms must have been present, the statements of the patient, her father, and the physician to the contrary notwithstanding.

It would be interesting to know how Dr. Macloughlin was apprised that no care was taken to ascertain the existence of cramps. The fact is simply announced that the patient had no cramps, and it would seem to be a reasonable inference that care *was* taken to ascertain whether this symptom was actually present or not.

"Case 3.—*Admitted September 2d*, 1854. Julia R., aged 22, went to bed perfectly well last night, slept soundly, and was attacked with vomiting and purging a watery fluid, and cramps in the stomach at 6 o'clock this morning. *Symptoms*—Vomiting, purging, feeble voice and circulation, lower extremities cold, blueness of the surface, and suppression of urine. When admitted, and after her recovery, she stated positively that she had no liquid discharges before the hour above-mentioned."

The same objection is urged to this as to the first case, and we have nothing to add here, in relation to the character of the discharges, to what was said of the first. The case is notable as forming an exception to the "invariable rule," even if we admit the anomalous position that no case can be called cholera until spasms commence. For here we have the evidence of the patient, elicited on the most careful and rigid examination when admitted, and again *after recovery*, that she had had no liquid discharges before the hour at which the vomiting, purging and cramps were *simultaneously* developed.

"Case 4.—*Admitted September 3d*, 1854. Thomas O., aged 44, went to bed well last night, slept as well as usual, and was awakened at 5 this morning with an inclination to vomit and purge, which soon after commenced. Cramps were developed at 6. *Symptoms*—Vomiting and purging, intense thirst, voice whispering, skin cold, clammy, and corrugated on the fingers, cramps, partial suppression of urine. Death in 35 hours."

"Case 5.—*Admitted September 16th*, 1854. Ellen M., aged 29, went to bed well last night, slept soundly, and arose, feeling as well as usual this morning. At 8 o'clock, violent vomiting and purging came on, and cramps at 9. On careful and minute inquiry, no evidence could be elicited that previous diarrhœa had existed. *Symptoms*—Vomiting, purging, thirst, skin cold and blue, suppression of urine. Death in 25 hours."

"Case 6.—*Admitted September 22d*, 1854. Margarette M., aged 36, having felt and slept well the preceding night, was attacked with vomiting and purging at 5 yesterday morning, and cramps at 6. She was carefully interrogated when admitted, and again after her recovery, but no evidence that she had liquid discharges prior to the onset of cholera could be elicited. *Symptoms*—Vomiting and purging of rice-water fluid, thirst, feeble voice, skin cool, suppression of urine, cramps."

To the above cases we have the following reply ·—

"That cases fourth, fifth, and sixth had each a premonitory diarrhœa for an hour, by Dr. Hutchison's own admission; and, further, the reports of these cases are such that they do not justify the conclusion that those individuals were in perfect health, and free from diarrhœa, before the moment at which they are said to have been first attacked with vomiting and purging."

It will be observed that the declaration, "that each case had a premonitory diarrhœa for an hour," is based on the idea that cholera does not exist until cramps are developed. Whether the cases are reported with sufficient care to justify the conclusion that the patients were or were not free from premonitory diarrhœa, and whether it was necessary to burden my report with further details of the inquiries which led to this conclusion, I leave for the decision of others.

It is objected further:—

That, "the mere statements of patients, that they were perfectly well, that they slept well, that they ate their food as usual, is no proof that they were not laboring for a few hours, a few days, or a few weeks under diarrhœa." It is surprising that the additional "statement of the patients" was omitted, viz.: that they had no liquid discharges before the sudden development of the symptoms detailed. In commenting on all of the above cases in my report, it is stated: "The patients not only felt well, slept well, and ate as usual, but, *on the most careful inquiry, it was ascertained that nothing like a diarrhœa, no liquid discharges had preceded the severe attack.*"

I regret that Dr. Macloughlin has given cause for a suspicion of unfairness, by omitting the important portion of the sentence which I have italicised. These patients surely could have had no motive for deceiving; and if the "mere statements of patients," when carefully elicited, cannot be accepted, (especially when corroborated by their friends, as in the first and second cases), how is it possible ever to obtain a perfect history of any case?

In conclusion, Dr. Macloughlin's opinion, that cholera does not exist until cramps appear, enables him to declare that the fourth, fifth, and sixth cases had each a premonitory diarrhœa for an hour, according to my own showing, for it is recorded that *cramps* did not appear until an hour after the sudden attack of vomiting and purging. He might have made the same disposition of the first case. Admitting the correctness of his definition, there still remain two cases, to which, unfortunately, it cannot furnish a satisfactory reply; for, it will be remembered that in the second case there were no cramps, and in the third, vomiting, purging, and *cramps* occurred simultaneously. In replying to these cases, he relies on the gratuitous assertion, not directly, but by implication, that as the patients had cholera, they must have had premonitory diarrhœa and cramps.

But, if we admit the well-established fact, that cramps are a non-essential symptom of cholera, the objections to the fourth, fifth, and sixth cases are removed, and they stand as illustrations that cholera may occur without premonitory diarrhœa. The mere assertion, that "the reports of these cases are such that they do not justify the conclusion that those individuals were in perfect health and free from diarrhœa, before the moment at which they are said to have been first attacked with vomiting and purging," is worthless as an argument. The bare assertion of *novel facts*, even though it emanate from sources whose honesty and good faith we cannot doubt, will not be accepted. For the rigorous exactness to which medical science is aspiring demands that all its facts be based on the most indubitable evidence of their truth.

Whether, therefore, we admit that the choleraic stage commences with cramps or not, it has not been demonstrated that I have by my own showing proved that the six cases, published as exceptions to "the invariable rule," had a premonitory diarrhœa; and I think Dr. Macloughlin's candor will compel him to admit this to be so, although his ability to establish an invariable rule might be gratifying to himself, as well as others who rely more on his statements on this subject than their own investigations.

Art. VI.—*Bandaging with Adhesive Strips after Parturition.* By W. M. Ryer, M. D., Stockton, California.

In a case of mania following parturition, I was induced to apply strips of adhesive plaster instead of the bandage used ordinarily for the support of the abdominal walls. This application answering the indications so admirably, caused me to use the same means in several subsequent but uncomplicated cases, wherein I found similar beneficial results.

In cases where there is much looseness of the muscles and integument, constituting that peculiar flabbiness of the abdomen so often met with among women who have had several children, I have found no abdominal supporter or bandage which furnishes equally satisfactory results.

In several uterine affections, depending upon the relaxed condition of the tissues of the lower part of the abdomen, I have also witnessed remarkable benefit arising from the application of this remedy, when other abdominal supporters have failed to give relief.

The patient being in a recumbent position, I apply the bandage in strips, from one and a half to two inches wide, and of sufficient length to pass two thirds around the pelvis. Commencing above and behind the trochanter major, and passing immediately above the pubis to a corresponding point on the opposite side from the place of beginning, I usually apply these strips to within an inch of the umbilicus, closely drawn when near the pubis, and gradually relaxed as we approach the umbilicus. Should I desire firmness, I then apply additional strips over the others, commencing from below.

This system of bandaging the abdomen after labor is so satisfactory, and so permanent, in comparison with the cloth-bandage and other kinds used, as to induce me to bring it before the profession.

Art. VII.—*Report of a case of Hydrophobia; with Statistical Observations.** By J. Lewis Smith, M.D., Physician to the North-western Dispensary, New York.

On Tuesday, March 20th, I was called to see a German, living on 64th street. Soon after my arrival, Dr. Büchler, an intelligent German, also arrived, and we examined and treated the patient together. He was a man of about 45, temperate and laborious, supporting his family by gathering old clothes through the city.

The friends told us that his health had been uniformly good till March 16th, when he began to feel a soreness and stiffness in the muscles of the right hand and forearm, and in those covering his neck. With this commencement his condition had become gradually but progressively worse, in spite of the efforts of an irregular, and at our visit the disease was so fully established, that both suspected at once its true nature.

His countenance was pallid and anxious, eyes bright, and his respiration at brief intervals short and hurried, best expressed, perhaps, without any superstitious reference, by the term panting. These paroxysms of dyspnœa began and subsided suddenly, leaving him free from pain, and calm, unless disturbed.

He talked freely, and at times in a loud voice, of his complaint, believing it rheumatic. He had not slept from the first, and though his appetite was good, the difficulty of swallowing had prevented his eating. Tongue moist and thinly coated; no nausea; did not complain of thirst; bowels constipated; pulse 100, full; surface of natural temperature.

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* Read before the Society of Statistical Medicine, New York.

There was no swelling about the throat, and pressure and percussion over the occiput and cervical vertebræ gave no pain, but the muscles on the sides and back of the neck were tender.

We gave him a bit of bread, which he chewed and swallowed, by a strong effort of the will, with difficulty. On trying him with water, the sight of the liquid, he said, increased the sensation of stiffness in his forearm, and when he attempted to bring the spoon to his mouth, his hand shook violently, and his agitation and dyspnœa were extreme. In his paroxysms he resembled one violently delirious, springing up in bed, and occasionally rushing forward to a post in the room, to which he clung till relieved.

On our asking if he had been bitten by a dog, he said that from four to seven months ago, in attempting to separate his own and another dog, he was bitten slightly on the hand by the latter. The wound healed readily, leaving little or no cicatrix. His dog was shown us apparently healthy; the other was owned in the vicinity, and was disposed of in the city soon after the bite was inflicted. What became of it is not known. His master denied that he had observed anything unusual in the animal, but some of the neighbors have since told Dr. Büchler that it acted strangely, running directly against objects, and showing unwonted moroseness and restlessness. We prescribed;—

Oleum Tiglii,
Ext. Bellad. Externally to throat.
Enemata of Beef Tea and Tr. Opii.

March 21*st*. We visited him again, and found his condition to all appearance much better. Six injections had been given, containing about ʒii of laudanum, and he had slept a little in the morning. Only three attacks of dyspnœa had occurred since the treatment was commenced, and he had taken about a pint of soup. He seemed revived and cheerful, and we began to doubt the accuracy of our diagnosis. He now had, however, stiffness in his left hand and forearm, that in the right continuing.

He took a little milk in our presence, but, on our proposing water, his agitation was so great that we did not urge him to take it. His aversion to water was stronger than to other liquids. Milk and soup he could swallow as easily as solid substances. The pulse was full, and varying suddenly without apparent cause. Two examinations, at a brief interval, gave 88 and 120 pulsations per minute. Treatment of throat continued—enemata to move the bowels, and afterwards of beef tea, adding laudanum at night, if no rest.

March 22d. Learned that he had died about midnight. After we left him on the 21st, he remained comfortable till about 4 P.M., when his bowels began to swell and pain him, and he could not pass his urine. His mind, for the most part calm and rational, occasionally wandered, and towards the close of life his attendant says he was, at times, furious. There was no more dyspnœa, his limbs remained warm, and his death was easy.

Autopsy 15 *hours after death.*—Present Drs. Büchler, Sewall, Watts and myself. Marked hypostatic congestion of surface; rigor mortis. The membranes of the brain were universally injected, and the glandulæ Pacchioni abundant and some of them unusually large. Upon the crown of the head, at the seat of these glandulæ, the arachnoid was raised by a clear serous effusion, to the amount, perhaps, of ℥ss. The cerebrum appeared natural, but the consistence of the cerebellum was diminished. In other respects, the brain and spinal cord, examined as low as the origin of the par vagum, seemed healthy.

There was nothing unusual in the appearance of the larynx, except that it contained a little mucus.

The dark gray substance so often mottling the lungs of the cadaver existed in great abundance over this organ, on both sides, and the intestines were much distended with gas. Otherwise, the thoracic and abdominal viscera presented their usual appearance.

Since this case came under observation, most of my leisure time has been spent in collecting records of hydrophobia. From the various medical journals accessible to me, I have obtained histories, more or less complete, of about two hundred supposed cases, besides brief notices of others. In analyzing these records care has been taken to reject, from our first table, all which did not give indubitable proof of canine madness, from the known rabidity of the animal inflicting the bite, pain, or some sensation in the cicatrix at the beginning of the disease, or other equally decisive facts. Such care has been necessary, because hydrophobia may be simulated by hysteria, inflammatory disease of the throat, and perhaps other affections.

The most extensive collection of hydrophobia cases yet made, so far as I am aware, was by Dr. Hamilton, of Edinburgh, at the close of the last century; but his object seems to have been not so much to investigate the nature of the disease as to determine its period of incubation. The published records are very numerous, and the statician has an ample field in the study of this complaint; yet most that has been written on this subject is based on a very limited number of cases. We have not had access to many of the continental journals, but most of the British and American have been examined, and from them these materials have been chiefly drawn.

It is a common belief, in and out of the profession, that rabies, if once developed in man, is invariably fatal. For this reason, records of favorable cases, which, bating the result, appeared in every way genuine, have not been retained in our first collection.

In the following table, the patients were males, and bitten by dogs, unless it be otherwise stated. For the sake of brevity, hours, days, weeks, months, and years, are represented by their initials, unless it be otherwise stated:

NO.	SEX—AGE.	PART INJURED—ANIMAL.	INCUBATION.	DURATION OF PRODROMES.	DURATION OF DISEASE.	AUTHORITY.
1	11	Upper lip	5 w.	1 d.	1 d.	Robert M. Kerrison, *Lond. Med. Repos.*, 1814.
2	34	Left leg	36 d.	12 h.	2 d.	Geo. Pinkard, " " " 1815.
3	3½	Upper lip	34 d.	12 h.	14 h.	Dr. Bellingham, " " " "
4	5	Face, head	18 d.	12 h.	2½ d.	Mr. Greening, " " " 1819
5	F. 30	Left foot	3 m.	4 d.	2 d.	" " " " " "
6	12	Right hand	128 d.	3 d.	3 d.	W. C. Dendy, " " " 1822.
7	57	Hand.—Cat	45 d.	3 d.	2 d.	W. T. Iliff, " " " 1824.
8	44	Forefinger, thumb	4 m.	No Prod.	40 h.	H. Whitmore, " " " 1825.
9	F. Adult.	Arm.—Cat	7 m.	1 w.	36 h.	*Lond. Med. & Phys. Jour.*, 1817.
10	21	Hand	11 w.	1½ d.	12 h.	J. Black, *Lond. Med. Gaz.*, Dec. 1827.
11	30	L. ring-finger, calf of leg.—Cat	9 w.	3 d.	1½ d.	Dr. Hue, " " " Mar. 1828.
12	60	Left hand	1 m.	....	....	F. Godrich, " " " Dec. "
13	4	Face	7 w.	1 d.	2 d.	Rec. Lond. Hosp., " " " June 1832.
14	F. 11	Right forearm	18 d.	1 d.	2 d.	F. Badgley, " " " July "
15	14	....	3 m.	1 d.	1 d.	W. T. Cox, " " " Sept. 1833.
16	19	—Cat	101 d.	1 d.	3 d.	M. Mopinot, " " " Aug. 1835.
17	11	Leg	80 d.	2 d.	2 d.	Chas. Thornhill, " " " Sept. "
18	20	Thumb	10 w.	No Prod.	42 h.	Fred. Pritchard, " " " Feb. 1836.
19	F. 37	Left arm and ankle	7 w.	2 d.	1 d.	Wm. England, " " " April "
20	17	Right wrist	6 w.	....	....	T. B. Curling, " " " Aug. "
21	26	Left cheek	5 w.	36 h.	2 d.	F. C. Jones, " " " Oct. 1837.
22	12	....	2 m.	....	30 h.	" " " " " " "
23	28	Three fingers	2 m.	1 d.	2 d.	F. Hawkins, " " " Nov. "
24	72	....	15 m.	4 d.	2 d.	Dr. Burne, " " " Apr. 1838.
25	F. 53	Right hand	64 d.	12 h.	36 h.	J. W. Ilott, " " " Oct. "
26	13	Right hand	50 d.	No Prod.	2 d.	C. Hawkins, " " " June 1844.
27	28	....	5 m.	6 h.	30 h.	C. Dawson, " " " 1849.
28	16	Head, back, right arm, leg	99 d.	12 d.	30 h.	" " " " "
29	F. 37	Right thumb.—Cat	over 3 m.	10 to 12 d.	60 h.	T. L. Wells. " " " June 1849.
30	27	Forearm	49 d.	1 d.	3 d.	Mr. Key, *Lond. Lanc.*, Sept. 1824.
31	15	Left thumb and finger	1 m.	1 d.	2 d.	Thos. Renwick, " " May 1825.
32	23	Wrist	9½ w.	....	4 d.	Guy's Hosp. Reports, " " Feb. 1826.

NO.	SEX—AGE.	PART INJURED—ANIMAL.	INCUBATION.	DURATION OF PRODROMES.	DURATION OF DISEASE.	AUTHORITY.
33	Adult.	Hand	5 w.	1½ d.	36 h.	P. Gaspard, *Lond. Lanc.*, 1826.
34	17	Left hand	7 w.	....	2 d.	Guy's Hosp. Repts., " " May 1826.
35	25	Right forefinger	9 w.	4 d.	2 d.	Dr. Latham, " " July 1826.
36	13	Cheek	56 d.	3 d.	2 d.	Henry Pout, Esq., " " June 1827.
37	22	Foot, thigh, hand...........	....	Several w.	2 d.	C. Jenkins, " " July 1827.
38	16	....	....	2 d.	1 d.	Dr. Elliotson, " " May 1829.
39	Adult.	....	3 m.	12 h.	36 h.	Dr. Johnstone, " " Aug. "
40	31	Foot......................	6 w.	3 d.	1 d.	Lane. Franc, " " " "
41	45	....	46 d.	1 d.	1 d.	Chas. Brady, " " June "
42	56	Cheek	4 w.	12 h.	3½ d.	Hamb. Hosp., " " July "
43	53	....	3 m.	2 d.	1 d.	W. Simpson, " " Oct. 1831.
44	15	Right little finger.—Cat	8 w.	1 d.	2 d.	Dr. Elliotson, " " " "
45	46	Hand.—Fox	6 w.	1 d.	1½ d.	Lond. Hosp., " " July "
46	Boy.	Left leg	7 m.	4 or 5 d.	1 d.	J. G. Davey, " " Febr. 1837.
47	66	....	125 d.	....	2 d.	Westminst. Hosp., " " March "
48	F. 23	Leg	66 d.	12 h.	1 d.	Geo. Tucker, " " May "
49	F. 26	Upper lip......................	....	112 d.	2 d.	Mr. Hutchison, " " Dec. 1838.
50	31	....	56 d.	1 d.	2 d.	H. Bateman, " " Febr. 1844.
51	8	Upper eyelid	59 d.	1 d.	2 d.	H. H. Walton, " " May "
52	12	Right ankle.................	1 y.	2 d.	1 d.	Robert Allan, " " Sept. 1847.
53	5	Face	6 w.	7 d.	1 d.	George Fife, " " March 1849.
54	6½	Left eyebrow...............	37 d.	....	3 d.	R. Grinrod, *Med. Chir. Rev.*, July, 1834.
55	47	Left hand.—Cat	5 w.	2 d.	2 d.	J. F. Pettigrew, " " " Jany. 1835.
56	Adult.	Hand	7 to 8 w.	2 d.	1 d.	" " " " " " "
57	70	Right eyebrow	5 w.	No Prod.	3 d.	W. Jackson, *Prov. Med. & Sur. Jo.*, Dec. 1842.
58	8	Left eyebrow...............	10 w.	" "	3 d.	" " " " " " " "
59	4	Two fingers	158 d.	1 d.	1 d.	E. Parker, " " " " " 1843.
60	18	Left wrist..................	4 m.	....	59 h.	H. Jackson, " " " " Nov. 1844.
61	48	Right forefinger..............	6 w.	½ d.	3 d.	J. Aikenhead, " " " " Sept. 1845.
62	5	Under lip	27 d.	Few h.	2 d.	S. B. Denton, " " " " " 1849.
63	42	Left finger	6 m.	6 h.	36 h.	Dr. Sandwith, " " " " " 1850.
64	3½	Face, nose	22 d.	2 d.	36 h.	Repts. Cumberland Inf., " " " "

65	F. 7	Eyelid	19 d.	½ d.	2 d.	*Med. Times*, Dec. 11, 1841.
66	7½	Arms, leg, face	47 d.	Few d.	2 d.	W. H. Booth, " " Feb. 1843.
67	F. 9½	Calf of leg	13 w.	18 h.	40 h.	W. H. King, " " Nov. 4, 1843.
68	11	Left little finger	20 d.	3 d.	29 h.	W. Foley, *Med. Times*, May 25, 1844.
69	F. 13	Face	4 w.			Dr. Hooper, " " May 17, 1845.
70	Adult.		9 w.	Few h.	4 d.	Balt. Free Press, " " May 6, 1848.
71	19	Left leg	5 or 6 y.	2 d.		Dr. Hughes, *Med. Times & Gaz.*, May 27, 1854.
72	18		11 m.	2 d.	12 h.	Dr. Brandreth, *Edin. Jour.*, Jan., 1825.
73	Adult.	Both wrists	267 d.		2 d.	" " " " " "
74	15	Right arm	32 d.	2 d.	3 d.	J. A. Sidey, *Month. Jour. Edin.*, Dec. 1850.
75	8½	Right eyebrow	31 d.	Few h.	2 d.	Jas. Struthers, " " " Jan. 1851.
76	F. 20	Face, back	98 d.	12 h.	2 d.	Prof. Lawrie, Jr. " " " Sept. 1852.
77	Adult.	Right hand.—Wolf	5 w.	1 d.	2 d.	B. Gaspard, *Rev. Med.*, March, 1824.
78	24	Arms, legs.—Wolf	41 d.	Few h.	9 d.	Prof. Recamier, " " Aug., 1824.
79	48	Finger.—Wolf	32 d.	2 d.	2½ d.	M. Lepine, " " " "
80	F. 52		5 m.	6 h.	2 d.	Dr. Godelle, " " Sept., 1831.
81	Adult.		4 w.			Prof. Dieffenbach, *Rusts' Report.*
82	F. 10	Right arm	174 d.		2 d.	Dr. Fuchs, " " 1829.
83	15	Hand.—Cat	44 d.		2 d.	" " " " "
84	40	—Cat	10 m.	6 d.	1 to 2 d.	Dr. Mayer, *Hufeland's Journal.*
85	14		31 d.	1 d.	2 d.	Dr. Marshall, *Tract on Hydroph.*
86	45	Scrotum	42 d.	3 d.	40 h.	H. Oldknow, *Edin. Med. & Surg. Jour.*, 1809.
87	52	Left hand	17 d.	36 h.	30 h.	M. Labonardiere, *Bibleoth. Med.*, Aug., 1821.
88	5½	Left eye	3 w.			*Jour. de Phys.*, 1822.
89	14		45 d.	5 or 6 d.	1½ d.	M. Cassan, *Arch. General.* 1825.
90	F. Adult.	Leg	201 d.	5 d.	3 d.	Dr. Urbane, *Bib. Prac. Heil.* 1827.
91	28	Right thumb	6 w.	3 d.	1 d.	Dr. Consture, *Jour. Hefd.* 1829.
92	10	Upper lip	27 d.			Dr. Richiedei, *Lassana in Gaz. Med.* 1852.
93	Boy.	Hand		Few h.	24 h.	Abernethy, *Lecture on Hydroph.*
94	55	Middle finger	97 d.	24 h.	40 h.	Dr. Chairetes, *Dub. Med. Press.*. Sept. 7, 1853.
95	Adult.	Right hand.—Fox	6 w.	Few h.	36 h.	Dr. Howman, *Phil. Trans.* Vol. iii.
96	"	Right hand	10 w.	2 d.	4 d.	Dr. Watson, *Lecture on Hydroph.*
97	F. 15	Face	28 d.		15 h.	Dr. Marochetti, *Art. Hydroph.*
98	F. 40	Face, forearm, thigh.—Wolf	26 d.		4 d.	M. Ferrus, *Trans. of Royale Acad., Paris.*
99	F. 70	—Wolf	3½ m.			" " " " "

NO.	SEX—AGE.	PART INJURED—ANIMAL.	INCUBATION.	DURATION OF PRODROMES.	DURATION OF DISEASES.	AUTHORITY.
100	15	Face.—Wolf	13 d.		4 d.	M. Ferrus, *Trans. of Royale Acad., Paris.*
101	65	—Wolf	2 m.			“ “ “ “ “
102	Adult.	Left hand	6 to 8 w.		2 d.	Dr. Bright, *Recd. of Cases.*
103	52	Upper lip	5 w.	No Prod.	48 h.	Dr. Bright, *Rec. of Cases.*
104	Adult.		4 m.	“ “	48 h.	“ “ “ “
105	“	Hand	3 m.	Few h.	57 h.	“ “ “ “
106	17	Right middle finger	1 m.	Several d.	1 to 2 d.	Prof. Plumer, *Ed. Med. Ess.* Vol. V., 1777.
107	Adult.	Fingers	31 d.	No Prod.	24 h.	Dr. Middledorff, *Gunsburg's Zeitsch.*, Aug. '52
108	6	Face	10 d.	1 d.	2 d.	Dr. A. King, *N. Y. Med. Repos.*, Vol. 1.
109	43	Ear	4 w.	1½ d.	2 d.	Conn. Cour., “ “ “ “
110	16	Foot	5 w.	12 h.	1½ d.	Dr. P. S. Physic, “ “ “ 2.
111	13	Forearm	84 d.	Several d.	3 d.	Dr. S. Borrowe, “ “ “
112	13	Ang. of eye	101 d.	36 h.	3½ d.	Dr. J. R. B. Rodgers, “ “
113	11	Finger	12 m.	12 h.	20 h.	Dr. J. R. Coxe, “ “ “
114	11	Left thumb.—Raccoon	42 d.	1 d.	3 d.	Dr. Geo. Russel, *New Eng. Jour.*, 1823.
115	7	Eyelid, lip	30 d.	30 h.	2½ d.	G. Hayward, M.D., *Bost. M. & S. J.*, Jan. '54.
116	15	Leg, ear	28 d.	1 d.	2 d.	Chas. D. Homans, M.D., “ Mar. '54.
117	Adult.	Hand	57 d.	1½ d.	36 h.	J. S. H. Fogg, M.D., “ Apr. '54.
118	8		1 y.	2 or 3 d.	2 d.	Thos. W. Blatchford, M.D., “ July '54.
119	28	Hand	6 w.	Few h.	4 d.	Jas. Thorne, M.D., “ “ “
120	12		46 d.	2 d.	7 d.	Dr. Hartshorn, *Amer. Jour.*, October, 1848.
121	30	Hand	1 to 2 m.	1 d.	2 d.	Dr. S. Jackson, “ “ “ 1849.
122	18	Right wrist	98 d.	3 d.	1 d.	Dr. Curtis, “ “ “ “
123	7	Left little finger	3 w.	12 d.	12 d.	Dr. Coale, “ “ Jan., 1849.
124	40	Finger	3 w.		2 d.	Dr. Barton, *Phil Med. & Phys. Jour.*, 1820.
125	23	Finger	21 d.	1 d.	4 d.	Dr. Herron, *Western Jour. of Med.*, 1836.
126	Adult.	Left hand	44 d.	4 d.	3 d.	Dr. Thos. W. Blatchford, *Annalist*, Dec. '47.
127	3	Arm	Several m.	54 h.	54 h.	Dr. Dickson, *South. Jour. of Med.*, May, '47.
128	18	Right forearm	68 d.	1 d.	14 h.	Dr. A. H. Brown, *Ohio Med. & Sur. Jour.*, '48.
129	6	Thirty-one wounds	73 d.		4 or 5 d.	Dr. Thacher, *Treatise on Hydroph.*
130	73	Finger	90 d.	4 d.	3 d.	“ “ “ “
131	F. Adult.	Hand.—Cat	45 d.	3½ d.	2½ d.	Drs. Brewster & Childs, “

Nine of the patients in the above table were 5 years old, or under, fourteen from 5 to 10, inclusive of the latter age, thirty-nine from 10 to 20, inclusive, twenty-five from 20 to 40, seventeen from 40 to 60, and five over 60. The relative frequency of hydrophobia in the different periods seems to correspond closely with the degree of activity and exposure. Again, the fact that infancy is not exempt, shows the fallacy of the doctrine which imputes the disease entirely to fear.

Only eighteen of the number were females. So great a disproportion of the sexes is, perhaps, due to a difference of occupation ; a disproportion noticed also in tetanus, a complaint, in many respects, so similar.

The records enable us to give the months when 102 patients were bitten, and 107 became hydrophobic, as follows :

	Bitten.	Hydroph.
January	5	10
February	7	6
March	5	7
April	8	5
May	9	9
June	11	11
July	9	10
August	13	6
September	13	10
October	10	11
November	6	18
December	9	4
	102	107

This table shows how little the disease, both in man and in animals, is dependent on the state of the atmosphere ; and yet in some countries rabies is most prevalent at particular seasons. In certain provinces of France, and in Northern Europe, cases are most numerous in cold weather, the disease being communicated by wolves made rabid, it is thought, by hunger.

Of the cases occurring in the United States, 4 were bitten in winter, 3 in spring, 5 in summer, and 5 in autumn; 3 became hydrophobic in winter, 4 in spring, 2 in summer, and 9 in autumn. It follows that if there be any sanitary regulation for the prevention of hydrophobia, it should be in force the whole year.

The period of incubation, reckoned from the time of the bite till the commencement of preliminary symptoms, was as follows :

Cases.		Cases.	
In 1 - - - - - -	10 days.	In 13 from - - -	5 to 6 w.
" 1 - - - - - -	13 "	" 19 " - - - -	6 to 8 w.
" 1 - - - - - -	17 "	" 13 " - - - -	8 to 10 w.
" 2 - - - - - -	18 "	" 15 " - - - -	10 to 14 w.
" 1 - - - - - -	19 "	" 14 " - - - -	14 w. to 6 m.
" 1 - - - - - -	20 "	" 9 " - - - -	6 m. to 12 m.
" 4 - - - - - -	3 w.	" 1 " - - - -	15 m.
" 10 from - - -	3 to 4 w.	" 1 " - - - -	5 to 6 y.
" 18 " - - - -	4 to 5 w.		

There might be some doubt about the genuineness of this last case, but the patient, besides presenting the ordinary symptoms, and post mortem appearances, complained of pain in the bitten part.

The condition of the wound, at the time hydrophobia appeared, is recorded in eighty-one cases, in seventy-five of which it had cicatrized. In the other six, the wounds were healthy, and progressively healing—in two, having nearly closed. One of these (No. 78), was remarkable for the long duration of the disease—nine days. In this case, a free suppuration commenced on the fourth day, with a marked mitigation of the symptoms. In another (No. 108), the suppuration ceased, and the wound became dry, when the hydrophobic symptoms began. In no case was there a free discharge from the bitten part, if these symptoms were severe. These facts teach us a useful lesson in reference to the treatment.

In twenty-one cases, the appearance of the cicatrix is given, in six of which, it had a reddish color, or bluish, with red around. In two others, there was an inflammatory, and in two more, a raised appearance. Of the remaining eleven, one showed a loose attachment of the cuticle; one, a point of ecchymosis; another, an unusually dark hue, and eight bore a natural aspect. Probably, in the majority of cases, there was no visible change in the scar, else the records would not have been so silent on this point. Nor, with a single exception, do I find any change recorded in the superficial appearance of parts adjacent to the cicatrix. This exception occurred in Mr. Abernethy's practice, who noticed two red lines extending up the arm, apparently inflamed absorbents. I call attention more particularly to this point, because the bitten limb is often the seat of pain, as we shall see; and it is an open question whether this pain follows the course of the nerves, or absorbents.

It has been held by some, that hydrophobia may be communicated by a bite, though the cuticle remain entire. The records give only one instance (No. 96,) of a simple indentation; and when we recollect how easily a slight breach might escape detection, we may well doubt whether an inoculation ever occurs through the sound skin.

In this connection we may as well state that, with two exceptions (Nos. 49 and 109), the disease was in every instance communicated by a bite. In one of these exceptional cases the rabid animal leaped so furiously against the mouth of its mistress as to loosen a tooth. In the other the dog was allowed, the day before it became rabid, to lick a sore in the ear. Hydrophobia, after an incubation of four weeks, began in this patient by a pricking pain in that organ.

Of the animals producing the wounds, four were wolves, ten cats, one a fox, one a raccoon, and the rest dogs. All the wolves were probably rabid at the time of inflicting the injury, their exact history not being known, from the difficulty of observing wild beasts for any length of time. One of them proved its rabidity by communicating the disease to four individuals.

Of the cats, one showed no signs of rabies; another, though apparently well, had been bitten by a rabid dog; two were already mad, and another, sick at the time, became so afterwards.

The raccoon was in a wild state and killed. The fox was tame, and being teased in its cage. It appeared in good health, but, a few days after, died in such a way as to excite the suspicion of its having been poisoned.

Thirty-nine, at least, of the dogs were in confirmed rabies when the wounds were produced. One of these was a lapdog in a neighborhood where a rabid animal had not been known for years. This dog also bit a puppy, which went mad and died. An instance more conclusive of the spontaneous occurrence of rabies can scarcely be found, and yet Mr. Youatt denies that this ever takes place.

Fifteen other dogs, whose history was known, seemed well at the time of inflicting the bites. Of these, one soon after wandered from home, and another at an interval of two weeks. Six were immediately killed or disposed of, two of which had been bitten by rabid animals, and the other four were made furious by teasing. The seven remaining of the fifteen went mad within ten days.

Six other dogs acted suspiciously, giving evidence of some disease, the nature of which was not apparent. They were probably in incipient hydrophobia, and two afterwards ran mad. The other four left home, or were killed, so that the nature of their complaint was not known.

The history of the remaining dogs, in the collection, was unknown, or not recorded; but five of them appeared to be acting solely in self-defense.

From these records it appears that animals, before showing any symptoms of hydrophobia, may communicate the disease; and, from the fact that so large a number were being teased, the question may arise whether provoking the animal may not render the poison more energetic and increase the danger of infection.

A fact of considerable practical importance, brought to light by the records, is, that in many instances there was some exciting cause of the disease. One patient appeared to bring it on by exposure to wet, and another by eating fish having a strong odor. He continued talking of this food through his sickness, and just before his death vomited a portion of it. Four were taken with the complaint immediately after drunken revels. In one instance, witnessing the execution of a murderer; in another, a fall; in another (a child), fright, from seeing some one playing the ghost, ushered in the fatal disease. Again, a patient struck his foot against a nail with such force that he nearly fainted. Immediately the precursory pain arose in the bitten limb.

We see, here, the necessity of a person in danger of hydrophobia leading a regular and quiet life, avoiding all excesses, every source of anxiety or alarm. By such precautions many might, perhaps, be saved, who fall victims. There is some truth in the doctrine, that rabies is a peculiar nervous complaint, engendered by fear, for fear may often be the exciting cause.

(To be continued.)

ART. VIII.—*Report of a Case of Scarlatina, followed by Erysipelas; with Remarks.* By WILLIAM G. MEACHEM, M.D., of Wyoming County, N. Y.

DURING the last eight or ten weeks, I have had in my professional charge a female patient, who was originally severely attacked by scarlatina maligna; but for the latter and much greater portion of that time, has been struggling with diffuse inflammation of the subcutaneous areolar tissue. In doubt whether this erysipelatous affection simply supervened upon the scarlet fever, or is an unequivocal sequela of it, I have concluded to forward the particulars with a request that, if deemed advisable, they be given publicity through the columns of the Journal, in order, perchance, to elicit the experiences and sentiments of some of its readers corroborative of one or the other of these opinions.

The history of the case is briefly this:—Upon the 11th of May last, I visited for the first time Miss S. W., aged—— I found her laboring under the malignant type of scarlatina. Intense fever, indicated by strength, frequency and quickness of pulse, immoderate thirst and excessive heat of skin, the characteristic angina, and the diagnostic purplish patches of efflorescence, were prominently conspicuous. An active cathartic, lotions for the integument, etc., were prescribed. At a subsequent visit, through fear, by reason of the vehemence of the head-symptoms, of the occurrence of cerebral meningitis or cerebritis, she was freely bled. The prostrating violence of the poison soon fearfully manifested itself in a small, weak, quick pulse, delirium, greatly reduced muscular power, etc. The exanthem disappeared in about the usual time; but the ulceration of the fauces and pharynx continued for many weeks. A few days after phlebotomy had been performed, I discovered that the ulcerative process had been instituted in the edges of the incision in the integument and subcutaneous areolar tissue. The ulcer gradually spread in circumference, until its area was equal to that of a double eagle, or greater. At this point it remained stationary for a week or more; and then, under the persistent application of the tincture of myrrh, *pari passu*, diminished in extent until finally, after a protracted continuance of eight or more weeks, it entirely disappeared. Shortly after my discovery of the ulcer on the bend of the elbow, I observed an abscess upon the external border of the opposite forearm: this was punctured and several ounces of pus were discharged. Almost simultaneously with this, another abscess was seen upon the belly of the biceps flexor cubiti of the arm in which the patient had been bled. The contents of this were evacuated spontaneously through the orifice of venesection. At intervals of a few days other abscesses successively arose upon the occiput, the infra-spinous fossa of the left scapula, in the left axillary region of the thorax, upon the internal surface of the left arm, the epigastrium, the sacrum, underneath the inferior maxilla, upon the external aspect of each hip-joint, etc., some of which, upon being lanced, poured fourth 16 or 20 ounces of a fetid, sanious pus. In a portion of these instances of abscess, location seemed to have a predisposing agency, those parts of the body upon which its weight occasioned pressure being, *certeris paribus*, more obnoxious to suppuration than others: those of the scapula, sacrum and hips are examples.]

In passing, let me here remark, that these abscesses very distinctly exhibited to the sense of touch the characteristic *bogginess* or *quagginess* of abscesses resulting from diffuse areolar inflammation. Moreover, during the activity of the local inflammatory action preceding the formation of the abscesses upon the hips, the pain experienced in those parts was intolerably severe; a phenomenon, doubtless, explicable, by supposing the inflammation to have been seated, partially at least, beneath the fascia lata, which, by its compressing influence upon the congested and distended blood-vessels, occasioned that excess of suffering characteristic of inflammation underneath dense fibrous structures. Irritative fever, as indicated by a frequent pulse (ranging from 110 to 140), great debility, restlessness and anxiety, depression of spirits, etc., was also plainly discernible.

As might reasonably be anticipated, so profuse and continued a suppurative discharge excessively reduced my patient; so much so, in truth, that for a long time, in spite of nutritious diet, wine and bark, the scales of life and death fearfully oscillated, and even now the incertitude is scarcely less. In addition to the exhausting purulent discharge from the superficial areolar tissue, vast quantities of pus, often specked and streaked with blood, were expectorated. This doubtless, in part proceeded from the ulcerating surface of the throat, but its excessive amount would seem to have involved the existence of a vomica or an hepatic abscess, seeking an outlet through the channel of the air passages. Indeed, my apprehensions for the safety of my patient have, at times, been considerably intensified by observing now and then temporary symptoms of hectic; their transient continuance, however, emboldens me to hope against hope.

Remarks. This relationship of incidents suggests to the investigating medical mind, several queries.

1st. Was this erysipelatous inflammation a true sequela of the scarlatina?

Or, 2dly, was it excited by the venesection?

3dly. Is there any similarity between the respective poisons of scarlatina and erysipelas, or can one be metamorphosed into the other?

Before venturing upon a rejoinder to either of these interrogatories, let me premise, for the satisfaction of those who may be inclined to regard these abscesses of the superficial fascia as the results of simple inflammation, or I should rather say, of what may be named *scarlatinous* inflammation, be it simple or specific, that no author, so far as my reading extends, makes the slightest allusion to any such idea. Moreover, does not the diffusive nature of the phlegmasia forever interdict such a belief?

In reply to the first of these interrogatories, I will say that, although cases precisely similar to the one just rehearsed, are not recorded by any of those European and American authorities which I have had an opportunity of examining yet several writers concur in enumerating, among the sequelæ of scarlatina, abscesses of the testis, the joints, the ear, in the vicinity of the parotid and submaxillary glands, etc.

Now, though many of these are, in all probability, *simple* abscesses, still, it must be remembered, it is equally probable that as many are of erysipelatous origin, especially such as are found in the glandular structures, which are lined by prolongations of mucous membrane, the testis, for example; for it is well known that erysipelatous inflammation frequently seizes upon mucous membrane, which is in reality but an extension of the tegumentary tissue. Nor, indeed, do I see anything to forbid the reference of every variety of these abscesses to the same peculiar phlegmasia, as a cause, for we are authorized in believing that erysipelas may invade most, if not all, of the tissues of the body.

Though the erysipelatous character of the areolar inflammation, in the case of my patient, and the supposition of the existence of the same nature in the inflammatory action preceding the formation of the abscesses, referred to by authors, *would seem* to preclude the possibility of their being sequelæ of scarlatina, still, with the aid of a little theorizing, this possibility can easily be established.

To substantiate the doctrine embodied in the affirmative reply to this query, it becomes necessary to prove the possibility of the generation of the peculiar poison of erysipelas in the bodies of those affected with scarlatina, as an unequivocal consequence of the last-named disease, either by revealing it as the virus of scarlet fever, more or less modified in character, or as produced by the chemical action of the same virus upon the material particles of the body or its secretions, or as resulting from the pus which, in many cases, is so abundantly formed in the throat, or in a combination of two or more of these agencies.

Although the proof of the convertibility of the virus of scarlatina into that of erysipelas would, in the existing state of our knowledge, be to him who should attempt it as the distruction of the Nemean lion was to all, in its far-distant time, save Hercules, an impossibility, still I regard the theory which asserts that convertibility as a very plausible one, and, moreover, one which future science will declare to be tenable in part, at least, if not in its entirety.

A few facts may here be named which, though they do not directly serve as convincing demonstration, yet have a sensible inclination toward the reality of the hypothesis, which declares the possibility of the generation of the erysipelatous poison through the agency of scarlatina.

Firstly.—It is an observed truth, that scarlatina and erysipelas not unfrequently rage contemporaneously in the same locality, in corroboration of which, I may cite an instance within my own cognizance. The two diseases have been in synchronous activity in my own vicinage the past spring.

Secondly.—The two diseases are members of the same nosological order of Cullen, the exanthemata, a place justly assigned them from a thorough conviction of the similarity of their phenomena, and we may thence fairly infer, of the essential natures of their poisons, to some extent, as well. I would not be understood as here asserting, that I regard the various poisons of scarlatina, variola, rubeola, erysipelas, the plague, etc., as identical, or even necessarily similar, in intimate composition, but, simply, that they all possess a sufficient degree of resemblance in property to justify the appellation of "congeners," as embodied in the grouping together of these several pyrexiæ. Let us call to mind the old axiom—"Like causes produce like effects."

And, *Thirdly.*—These two eruptive fevers imitate each other much more closely, even in the minor stages of their progress, than any other two of the same order. The greater disposition to the formation of abscesses and to ulceration in these than in the other exanthemata, may be named in this connection, though, it is true, the one manifests a preference for the throat, ear, testes, joints, etc., the other, for the integument, subcutaneous areolar tissue, mucous membranes, etc. The efflorescences in the two varieties of disease, moreover, possess some characteristics in common, particularly the simplex type of the one, and the erythematous of the other; and I do not hesitate to believe that, as the exanthem of erysipelas evidences inflammation, so also does that of scarlatina, although upon the tegumentary surface, of a greatly-modified form. It is also a recorded fact, that sore-throat is as often an accompaniment of erysipelas as of scarlatina, though it by no means terminates in ulceration so often in the former as in the latter disease.

May not the supervention of diffuse inflammation of the superficial fascia upon cynanche maligna, in the case of my patient, be confirmatory of this theory?

Let me be clearly understood. The idea that I wish to convey is this, and this alone:—That it may be possible that the virus of scarlatina may generate in the human system the virus of erysipelas, or, at least, that the changes, organic, chemical, and physical, accomplished in the body of a patient suffering from scarlet fever, may occasionally produce, *de novo*, the virus of the "rose."

Let me now consider the second query—Was the erysipelas of my patient excited by the venesection?

It is, indeed, true, that phlebotomy not seldom occasions the induction of erysipelatous inflammation, and sometimes the variety known as diffuse areolar inflammation; and it is by no means impossible that, in the instance I am now reporting, we have an exemplification of this latter truth, since, as I have before said, erysipelas was prevailing to some extent in my neighborhood simultaneously with the epidemic of scarlatina. Although this reference of the cause, in this particular instance, is the one which modern science would approve and demand, still I see nothing to militate against a justification of my advancing this as a case in corroboration of the theory just propounded, especially since it harmonizes so well in every particular with the details of that theory.

Since an especial consideration of the third query would be substantially but a repetition of much that has already been suggested in this communication, I therefore desist from it.

It may be objected by the opposers of this hypothesis, that the contemporaneous or successive occurrence, in the same locality, of epidemics, of scarlet fever, and St. Anthony's fire, are mere coincidences; or, at most, that the one is superinduced upon the other simply by virtue of the greater susceptibility of the system during, or immediately after, an attack of one to an invasion of the other: this susceptibility being the legitimate consequence of diminished vigor of system.

Admitting that the existing or previous siege of one of the exanthemata may predispose the physical organism, by reason of its debilitating influence, to an attack from another of that order, a difficulty still remains unsurmounted, in the way of the convincing efficacy of this objection. It is this:—No other two exanthemata occur synchronously, in a given district of country, with a frequency at all comparable to that noticed in the occurrence of scarlatina and erysipelas.

May it not be, let me repeat, that the absorption of the putrid pus, which, in the anginose and malignant varieties of scarlet fever, is often so profusely secreted, sometimes institutes erysipelatous inflammation? Analogy strongly fortifies the affirmation of this query. Who does not know that erysipelas may be induced by the suppression of an habitual evacuation, as the purulent discharge from an old ulcer, probably in consequence of the resulting contamination of the blood? Who is ignorant that one of the septic poisons, generated in the bodies of those attacked by various diseases, and particularly inflammations of the serous membranes, puerperal fever, etc., will cause, by inoculation, the severest form of diffuse areolar inflammation? Now, is it at all improbable that poisonous material may be generated in the systems of scarlatina patients, at least of those afflicted with cynanche maligna, very similar to, or identical with, this septic animal poison of the living being or of the cadaver?

May not this have been the case with my patient? May not the putrid pus from the throat, or the degenerated natural secretions of the body, or, even the scarlatina virus itself, modified in its passage through the physical structure, have produced the erysipelas? I feel assured that the first two are adequate causes, and I shall esteem the theory which ascribes equal competency to the last, or, in other words, the opinion that the poison of scarlet fever may, in certain combinations of circumstances, be transformed, in the human body, into the virus of *ignis sacer*, as far from visionary or unfounded.

The chemical composition of these two animal poisons being, as yet, involved in mystery impenetrable by the scientific eye, the difficulty of substantiating this theory is, by consequence, greatly augmented; but I dare to hope, although I may not live to witness the realization of that hope, that future science and accumulated observation will combine to place this hypothesis among the indisputable truths of pathology. In the brilliancy of the light of a coming century, who shall say what may not be revealed?

ART. IX.—*Elkoplasty applied to the Treatment of an Intractable Callous Ulcer of the Leg.* By FRED'K D. LENTE, M. D., Surgeon to the West Point Foundry, N. Y.

TIMOTHY MAHONEY, æt. 68, no particular occupation, applied to me some three months ago with an ulcer about the size of a dime, situated at the middle of the outer aspect of the leg, of which he gave the following history:—That it commenced as a small, hard wart about a year ago, which sometimes pained him a little; this increased slowly in size for a time, and finally ulcerated on the top, having then a flattened appearance. It now began to give him a good deal of pain, the pain being of a gnawing, lancinating character. At the time of his application to me, the ulcer was of the size abovementioned, somewhat elevated above the skin, very hard and callous, with an indolent, granulated looking surface, with no inflammation about the ulcer or the surrounding integument. The pain he described as coming on generally at night, and being so severe as to prevent him from sleeping. General health good, and has always been so. Is capable of making a good deal of physical exertion, notwithstanding his age. I directed him an anodyne mercurial ointment, and he continued to use this for some time with but little benefit; the pain all the time increasing. I then commenced the application of the acid nitrate of mercury freely to the ulcer, and a little beyond it. This has been kept up at intervals for the last two months, with no permanent benefit, but always with relief to the severe lancinating pain. The ulcer has been more than once completely destroyed to below the surface of the surrounding integument, and has at times almost healed over, but it invariably resumes its former appearance. Patient was not subjected to any internal treatment, as there appeared to be no constitutional taint, and the ulcer to be confined solely to the integument.

To-day, February 27th, 1855, as further medical treatment appears not likely to result in any permanent good, I resolved to remove it with the knife, and, having subjected the patient to the full anæsthetic influence of sulphuric ether, proceeded to do so in the following manner:—A square piece of integument, including the ulcer, and extending a little beyond it on all sides, was removed, leaving the aponeurosis covering the muscles beneath apparently perfectly healthy. The upper and lower incisions were then prolonged both ways, the flaps, thus marked out on either side, partially dissected up, and their edges then approximated by the stretching and gliding process, and secured by sutures; the lines of incision above and below were then secured by fine sutures; about twenty in all were used. The dressing was completed by adhesive strips, a compress and roller.

March 1st.—To-day, removed the dressings carefully. Some oozing of venous blood, but the wound looks well; removed five or six sutures.

March 20th.—The complete healing of the wound has, up to this time, been retarded by sloughing of a corner of one of the flaps, but the cicatrization is now perfect, and the scar will be trifling.

Art. X.—*On the Use of Liquid Caoutchouc.* By J. B. D. Stillman, M. D., Physician to Demilt Dispensary, N. Y.

The utility of collodion, as an impermeable plaster in various cutaneous affections, is very generally acknowledged. It has, however, some disadvantages in certain cases, arising from its inelasticity, which makes its extensive application inconvenient, or inadmissible. In such cases, thin laminæ of *gutta percha*, oil silk, or adhesive plaster, are generally used. About a year since, I was presented by Mr. S. T. Armstrong with a bottle of the milk of the *Hevea* or Caoutchouc, in the liquid form in which it exudes from the tree. It is preserved in that state by the addition of a small proportion of free ammonia, and is now introduced as an article of commerce for manufacturing purposes, and, from my experience with it, I am impelled to call the attention of the profession to it, as a most useful contribution to our *materia medica.* It is of the color and consistency of pure milk, (if my recollections do not deceive me), but becomes transparent as soon as dry. Owing to its great elasticity, it does not contract so violently as the collodion, it adheres closely to the skin, and allows entire freedom of motion and application to any extent. In burns it has an advantage over any thing I have ever used, as also in erysipelas. An acquaintance with it by surgeons will lead, I do not doubt, to many valuable improvements in surgical appliances.

ART. XI.—*Veratrum Viride.* By SAMUEL GRISSON, M. D., Ann Arbor, Mich.

THE attention of the medical profession has lately been attracted to the great virtues said to be possessed by the American Hellebore (Veratrum Viride). Important results are claimed, from its careful and prompt exhibition, by Dr. Norwood, who has recommended the use of this medicinal agent so highly, and, as some may think, with too sanguine hopes of its almost specific use in several diseases. Whether the expectations which Dr. Norwood seems to have of this plant will all be realized, is a matter which time and the experience of medical practitioners must eventually determine, and it is for this purpose that every one who has used this powerful agent should give the medical public the benefit of his observation. I have used the veratrum viride in only two cases. The first was a case of typhoid fever, so called, although the enteric symptoms were almost entirely absent. This case had progressed unfavorably, when it came into my hands, and the hopes of a successful termination were very limited at that time. The exhibition of the veratrum appeared to exert no appreciable effect on the disease, nor did it seem to diminish the number of pulsations at the wrist. The second case was that of a severe attack of pleurisy, in a lady twenty-six years of age. After complaining for several days of feeling not as well as usual, and after one day's exposure to the damp and cold air, she was seized in the evening with chills and fever, with very severe lancinating pain in the left side, which caused her to scream every time she breathed or coughed. Her pulse was full and hard, and beat 120. She was bled ℥ xiv., which had the effect of stopping the pain in her left side almost immediately and entirely. The blood had the buffed and cupped appearance as much as, or even more than, I had ever seen it before. The patient appeared to be gratified with the effect of the bleeding; but the severe lancinating pain returning in about three hours, and this time in the right side, more blood, to the amount of ℥ v., was abstracted, when syncope was nearly induced.

Pain was somewhat diminished, but by no means entirely removed. The blood, however, showed no more buffy or cupped appearance. Pulse still 120, without any more hardness. Ordered calomel, grs. xii., to be followed with castor oil if necessary; blister to right side to be dressed with ung. hydrarg.

The following day the calomel had operated well, and the blister drawn well; but, the patient not having improved much, I determined to use the veratrum viride, especially as the pulse was still 120. I directed 4 drops of the tincture to be given at two o'clock, P.M., and the same quantity to be repeated every hour, until I saw the patient again, which was a little after five o'clock, P.M. I did not follow the directions of Dr. Norwood, who, I believe, orders 7 drops the first hour, and one additional drop every subsequent hour, until reduction of the pulse has taken place. Judge of my astonishment, when I found the pulse reduced to 96, at my visit a little after five o'clock, after the patient had taken four doses of 4 drops each. She complained bitterly of the medicine, that it made her very sick, and declined to take any more of it. Insisting, however, upon its further use, she was induced to take two more doses of 4 drops each, when, at seven o'clock, P.M., the pulse was reduced to 64. The medicine was now suspended, and the pulse fell still more, till it reached as low a point as 60 before eight o'clock. Hysterical symptoms supervening, morphine, in repeated and large doses, was administered with the happiest effect. Next morning the pulse had risen to 88, but one or two doses of the tincture, of only 2 drops each, reduced it again to its former standard, and the patient recovered rapidly without any untoward symptoms, and without the further exhibition of any more medicine. I would also state, that there was a violent palpitation of the heart, previous to the administration of the veratrum, but the lady assured me that even after taking the first dose she could feel this very sensibly diminish, till it disappeared, with the other symptoms.

PART SECOND.

CRITICAL ANALYSIS.

ART. XII.—*On the Nature, Signs, and Treatment of Childbed Fevers;* in a Series of Letters to his Class. By CHARLES D. MEIGS, M.D., Professor of Midwifery and Diseases of Women and Children, in Jefferson Medical College, Philadelphia, etc., etc. Philadelphia: Blanchard & Lea, 1854. 8vo. pp. 362.

Puerperal Fever as a Private Pestilence. By OLIVER WENDELL HOLMES, M.D., Parkman Professor of Anatomy and Physiology in Harvard University. Boston: Ticknor & Fields, 1855. 8vo. pp. 60.

IMPERFECTLY as the term puerperal fever serves to define the pathological conditions to which it is universally applied, it is, nevertheless, a term of definite and fearful import to both the practicing accoucheur and the unfortunate victim of the disease. To them, no other appellation, however generically or pathologically correct, could be more truly significant. Multitudes of widowed husbands and motherless children have too sadly known the terrific fatality of the malady that so frequently causes blighting desolation to homes and hearts, at that period of a mother's existence when joys and hopes are brightest; while almost every practicing physician can bear testimony to the anxious vigil which every case of childbed fever has uniformly cost him, from the first prodromic symptom, until the patient was fully recovered, or, alas, had reached the fatal end to which the disease so fearfully tends.

No disease which we are called to treat demands greater promptness and skill in diagnosis and therapeutical management; none requires a more enlightened and discriminating judgment, or more accurate pathological knowledge on the part of the physician; for the malady occurs at the most important and susceptible hour of a woman's existence, and the insidiousness and suddenness of its onset are equaled only by the rapidity of those grave pathological events that mark its progress, and which inevitably jeopardize or destroy life.

Much as has been written upon the subject of puerperal maladies, and numerous as have been the theories relating to their pathology, it has remained for physicians of the present day to reduce the facts in this department of Medicine to anything like scientific exactness; and that even some of the most important questions relating to the special etiology and pathology of puerperal fever yet remain *sub judice*, more striking evidence could not be had than is afforded by the two treatises we are about to examine.

The Letters of Professor Meigs will be read with great interest by the thousands who have admired him as a teacher, and loved him as a kind-hearted professional friend; and whatever may be the merits of the author's peculiar opinions, and whatever his errors, no physician can attentively read these letters without profit.

The ample clinical experience which Dr. Meigs has so long enjoyed in his special department of practice, no less than the eminent position he occupies as a teacher, should certainly qualify him to speak with assurance upon the important topics which called forth these letters; and, although the author's enunciation of his opinions is occasionally too dogmatic to be agreeable, those opinions are certainly worthy a thorough investigation.

Dr. Meigs' heroic practice of blood-letting in the treatment of puerperal fever, and also his denial of the contagiousness of the malady under any circumstances, are already well known to the profession. In these letters he gives the reasons upon which he has based his doctrines; and notwithstanding the pugnacity with which he denounces all conflicting opinions, and especially those which he has designated as "the jejune and fizzenless dreamings of sophomore writers," no one can doubt that Dr. Meigs always speaks his honest convictions.

The first three letters are devoted to a rambling account of the antiquated notions of *errements du lait*, *lait repandu*, or milk metastasis, which may be interesting to the students of his class and such other persons as have never examined the history of those chaotic fancies that filled the minds of physicians of early times, before there was any correct knowledge of the pathological anatomy of this and kindred maladies.

Though entirely unconnected with the subject, our author refers to the obsolete dogmas of Willis, Doublet, and Vigorous, as being the basis of the rational doctrine of blood vitiation taught by Ferguson and Rigby—a doctrine, correct or not, that certainly has other and better foundation than the vague conjectures of those old writers. Dr. Meigs himself refers to the fact that pyæmia is apt to occur in puerperal maladies; and as the blood is frequently found in this diseased condition in fatal cases of puerperal fever, it is not strange that Ferguson's theory is a popular one.

Previous to Ferguson's publication, Cruvelhier had taught that the internal surface of the uterus after parturition, like a stump after amputation, is apt to become a nidus for pyæmic poisoning, pus and putrid fluids being absorbed therefrom, and conveyed throughout the adjacent viscera and tissues. This theory of the etiology of childbed fever may be wider the truth than that taught by Locock and others, who consider that the primary morbid impression is made upon the nervous system; but the doctrine of toxæmia is based upon facts that have been observed in the symptomatic progress of the disease, and in its pathological anatomy—not upon any modification of the old hypothesis of a milk metastasis.

Adopting the theory of *endangial hæmatosis*, or the blood-making power of the *membrana vasorum communis*, Dr. Meigs announces that "many of our most fatal childbed fevers are nothing more nor less than instances of endangitis, cases in which the membrana vasorum of the uterine and crural, and even the cava veins, are the seat of an inflammation called childbed fever, milk-leg, depôt laiteux," etc., etc.

To this doctrine of phlebitis no one will take exception, for it has been demonstrated sufficiently often; but not every pathologist could subscribe to the following bold statement which our author puts forth concerning the special pathology of the phlegmasiæ:

> All scarlatinas, measles, variolas, varicellas, erysipelas, gout, rheumatism, and many forms of childbed and other fevers, have their prime seat in the blood membranes (endangium), and are but so many varied expressions of its diseased condition.

Now, if there exists any foundation for this bold hypothesis, it certainly is not surprising that Dr. Meigs should find in phlebitis, or, as he learnedly denominates it, *endangitis*, the principal cause and primary pathological event of childbed fevers. But if Dr. Meigs bases his hypothesis upon the fact that, in less than a moiety of the cases of death from puerperal maladies, there have been found evidences of uterine phlebitis, or, as we may infer from his language, upon some collateral evidences afforded by the phenomena and history of the eruptive fevers, this announcement of his widely-applied hypothesis would seem to be at least premature. Locock and Ingleby, or Cruvelhier and Ferguson, can furnish far more satisfactory demonstrations of their respective theories. Indeed, unless Dr. Meigs' theory of "Endangitis" can be made to apply to all inflammatory diseases, both simple and specific, we conceive that it must eventually share the fate of the fanciful hypotheses of Willis, Puzos, and Vigorous; and even if applied to inflammations, generally, we fear it may find no clearer demonstration than did the old notions of a *lentor*, the *error loci*, etc. It were well for the honor of medical science, and for the credit and advancement of the healing art, that all hypothetical philosophizing upon the subject of inflammation, and upon the occult processes of hæmatosis, were refrained from until we obtain more reliable data from which to deduce rational theories.

We do not find that the distinguished author of these Letters has added anything to the already existing stock of knowledge on the subject of inflammation, and he has contributed nothing to our knowledge of the pathological anatomy of puerperal fever. He has merely announced the fanciful hypothesis of endangitis, or an aberrant endangial hæmatosis, as the *ultima thule* of pathological research.

The following is a striking specimen of his disquisitions upon this theme:

> "The blood is the fluid body. The body is fixed or rigid blood." (Burdach.) The antagonism or polarity of these two is a vital force—either dies but for the continued activity of the other, and this relation of each to the other takes place through, and only through, the solids of the blood vessel. (Endangium.) * * * * *
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> * * * A woman pregnant is often observed to labor as to her circulation; she becomes sometimes plethoric and hyperinotic; at other times she is to the last degree hydræmical. The force of her hæmatosis is exaggerated or exhausted, as the case may be, and the direct fault, the pathological fault, is to be traced to a state of the Endangium, which is her blood-making tissue, which has the same relation to the functions of hæmatosis as the gastro-enteric mucous membrane has to the process of her digestions.

As we shall presently have occasion to notice, this crude theory which Dr. Meigs has adopted, and which determines both his views concerning the etiology and pathology of puerperal fever, and his practice in its treatment.

Is Puerperal Fever Contagious? Professor Meigs has decided that it never is. Professor Holmes has *proved* that it often is contagious, and sometimes fearfully so.

The poetic Harvard professor has furnished an absolute demonstration, by facts, of the affirmative, while the veteran and staid teacher and accoucheur of the Quaker city has defended the negative with the poetic arguments of fanciful hypothesis, and by an elaborate investigation of the etymology of the term contagion.

This question of the communicability of puerperal fever being one of the most important that can concern the friends of a lying-in patient, or that ever addresses itself to the conscience as well as the self-interest of an accoucheur, any difference of opinion on the subject naturally leads to earnest discussion, if not to acrimonious feelings. But upon such a question, involving, as it does, the lives of confiding patients, and the honor of our art, physicians should at least be so far agreed as to yield assent to any rules of attendance upon puerperal fever cases, which the majority of intelligent physicians in any community may adopt.

Dr. Meigs utterly denies that childbed fevers are ever communicable from one person to another; and he bases his argument upon the following considerations: 1st. The topical inflammation of the pelvic organs in some of their tissues seems to be the primary pathological event, while the fever is merely symptomatic. 2d. Contagious diseases are all specific in character, as variola, syphilis, etc. 3d. They affect the race of mankind without respect to age, or sex; it is not so with puerperal fever. 4th. It is an absolute condition of contagion that it must undergo some certain incubation. 5th. Puerperal inflammations are often more rapid in progress than infectious diseases are. 6th. The medical opinions and doubts of certain reputable physicians; as Prof. Dewees, Dr. Robert Lee, Baudelocque, and Jacquemier.

Prof. Meigs strongly fortifies his opinions by certain facts that have been observed in hospital practice where puerperal fever has been endemic, and especially does he find his views corroborated by the experience of Von Busch in the lying-in hospital of the University of Berlin.

Dr. Holmes' Essay, which was first published some twelve years since, having attracted marked attention to the question of contagion, in Great Britain no less than in our own country, and as that Essay presents an incontrovertible argument, and a most earnest appeal to the medical profession, Dr. Meigs has very naturally made special allusion to it and its talented author. In language and in a spirit that reminds one of the haughty giant who defied the champion and poet of Israel, the "American writer of a small pamphlet essay" is very summarily disposed of; but, in Dr. Holmes' rejoinder and the republished Essay, are found selected the *facts* just suited to pierce the closest brazen armor of assertion and theory. The arguments adduced by Prof. Meigs are briefly answered by Prof. Holmes, and the facts upon which they are based he endeavors to assess at their true value. There is no attempt at retort upon the author of the letters, notwithstanding the provocation. With the dignity of a true physician, Dr. Holmes says in his rejoinder:

"I take no offense and attempt no retort. No man makes a quarrel with me over the counterpane that covers a mother with her new-born infant at her breast! There is no epithet in the vocabulary of slight and sarcasm that can reach my personal sensibilities in such a controversy."

It is admitted on all hands that puerperal fever often prevails in an endemic or epidemic form, and that in these forms the malady is usually of a highly malignant character; that epidemic puerperal maladies have prevailed with more or less constancy in connection with epidemic or malignant erysipelas; and that whether epidemic or not, but especally when epidemic, cases of erysipelas and of puerperal fever are sometimes observed to occur in such relations as to lead to the supposition that, through the agency of the accoucheur or some other medium, erysipelas in one patient may induce a puerperal fever in a lying-in patient. But more universally is it admitted that, epidemics of puerperal fever have been frequently observed to be limited to the practice of a single physician, however widely that physician's patients may have been scattered and however great the number of accoucheurs in the same community. Again, the instances are not infrequent in which such individual epidemics have sprung up and followed in the practice of a particular accoucheur who, immediately preceding his initial case of puerperal fever, had been exposed to the cadaveric infection of puerperal or other diseases, in autopsies held in places remote from the localities that subsequently enjoyed his services as an obstetrician, and suffered from the epidemic that followed his practice.

It was by the collection of reliable facts relating to these points, and by an investigation of the circumstantial history of the individual cases of the disease, that Dr. Holmes succeeded in arousing the attention and the conscience of our profession to the importance of the questions which are involved in the disputed point that these facts seem to settle; and we trust that every physician in our country will procure and read this excellent Essay of Dr. Holmes, which Dr. Ramsbotham has recently pronounced to be "the best paper in any language written to prove the highly contagious nature of puerperal peritonitis; * * * a masterly performance, and well worth perusal by any skeptics on the subject."

The author of the Letters seems to have furnished, in defense of his opinions, the strongest arguments of which the negative of this question of contagion is susceptible, and we entertain the opinion that the peculiar earnestness with which he has enforced the doctrine of the non-contagiousness of puerperal fever will, upon the whole, prove beneficial to the physicians who read his book; for the Professor's reasonings upon this subject will fail to convince many of his class who, but for the attention and criticism which this portion of the treatise will provoke, might be left to adopt, without question, the author's heroic practice of blood-letting.

But Dr. Meigs' Letters are by no means devoted exclusively to the defense of opinions which are of questionable correctness, or to doctrines that are of doubtful utility.

In Letters 7, 8, 9, and 10, is furnished a very complete and practically valuable *résumé* of the rational etiology, the semiology, and the pathological anatomy of childbed fevers, together with a brief history of puerperal fever epidemics.

Letters 19–26, inclusive, are devoted to the subject of *treatment*. Blood-letting is announced as the "chief remedy," and the author's views of the *ratio medendi* are exhibited in the following quotations:

> As a physician in practice, I could not but be much given to confide in phlebotomy as a means of conservation against threatened attacks, as well as the case of sickness already formed; for as much as in all my views of vital action, whether physiological or pathological, I have never been able to conceive of either sense or motion as things possible, independently of a quantitative state of the circulating blood. I speak here of the capillary blood, in the part wherein the sensation is perceived, or the motion effected. I think I shall never become able to view the matter in any other light; for I am convinced that all acting power of the nervous mass is an absolute and direct consequence of the combination of oxygen, in the blood, with the albuminous element of neurine. * * * Febrile diseases and all inflammations are, manifestly, conditions or states growing out of over-production of this neurosity, in the whole or in the parts. * * * The brain capillaries give out the oxygen, whose combination with neurine elicits the flash of life as the biotic force or nervous force; hence, quantitative states of the blood in the encephalon determine the quality or force of the nerve stream. In inflammations, on the contrary, it is the organs or tissues that are first to be affected; and from such affections or modifications of their vital state flow the constitutional disorders, reactions, or perversions. The former are centro-periphral; the latter are pepherocentric maladies. They are diseases of opposite poles; the idiopathic fevers being affections dependent on states of the encephalic pole, while inflammatory diseases and disorders of the organs are results of failure or derangement in the organ-poles of the body.
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> Tissues, in a state of inflammation, may be said to tend always to expand or augment the areas of the phlegmasia, in a ratio compounded of the force of the blood's motion within their capillary vessels, and the vital power of vascular resistance to the injecting force of the heart. A strong, full, frequent pulse, tends more to the expanding of the inflamed areas than a weak, small, slow one. Therefore, to diminish the injection power of the heart, is to lessen the tendency to expansion in phlogosed areas.

Dr. Meigs considers that the lancet, boldly used, is adequate to meet all the great emergencies of puerperal fevers. Leeches, cups, and mercurials, in his estimation, are of no value, and the use of opium of very questionable utility.

Copious bleedings, *coup sur coup*, and continued so long as pain exists or the blood is *sizy*, is the only treatment in which Dr. Meigs has any confidence. He also insists upon the great importance of keeping the bowels open, and, although the means he recommends for this purpose are as mild as purgatives can be, it has always appeared to us that too much care is bestowed upon the alvine dejections in cases of puerperal peritonitis. It is in connection with peritonitis that tymponitis is apt to occur, and our author says:—" It is against this frightful tympanitic distension that the use of purgatives should be directed." In this connection, he incidentally suggests a remedial agent of great value in these cases, an agent which we have in several protracted and typhoid cases resorted to with great satisfaction. He says:—" I have found doses of tincture of nux vomica to act very fortunately, in reducing the tympanitic distension, in certain cases of childbed fever. The doses, say five drops every two or every four hours, may be safely exhibited."

Sudorifics enter largely into our author's treatment of childbed fevers; and among these, after Dr. Meigs' posset drink, tartrate of antimony stands first. This he administers in minimum doses of from the thirtieth to the seventieth of a grain. The posset, which we are told will cause a patient to " sweat like a squeezed sponge," is made as follows:—" Take a table-spoonful of sherry, a wine-glassful of milk, and a dessert-spoonful of sugar; pour over the mixture three-quarters of a pint of boiling water, and strain the liquor, to be taken rapidly and as hot as it can be borne." Dr. Meigs adds, " whosoever swallows this posset will infallibly sweat profusely within a few minutes after swallowing it."

Blisters, turpentine stupes, and sinapisms are utterly denounced by Dr. Meigs, and the simple epithem of a soft wet cloth, under oiled silk, is very justly commended as the pleasantest of all topical applications to the abdomen.

The view which Dr. Meigs takes of the relation of puerperal maladies to typhus and other grave diseases, seems to be eminently rational, and it aids him in accounting for many of the facts observed in epidemics of puerperal fever, especially such epidemics as are frequently witnessed in hospitals and lying-in asylums.

Letter 28th is devoted to *febris gravidarium.* The author says upon this subject:—

> A *febris gravidarium* ought, in my opinion, to be invariably looked upon as an endangial inflammation. It is a real disorder of the blood-vessels, and its seat is chiefly in the sanguiferous vessels of the reproductive system of tissues. It is this that renders it dangerous; a danger not a little enhanced by the uncertainty and even impossibility of making an early diagnosis. The diagnosis is an *ex post facto* determination in these maladies.

Letter 29, on crural phlebitis, completes the volume; and whatever may be the merits of the work as a literary effort, there can be no doubt that the many practical suggestions which the letters contain, and the earnest hints they give to young practitioners, will prove eminently serviceable for practical purposes.

Those who appreciate the circumstances under which these Letters were written, will not harshly criticise the author's peculiarities and faults of style. Professor Meigs has a law unto himself in rhetoric; and it is not unjust to say he may claim as much for some of his logic. He has opinions that are peculiarly his own, and which he defends with a vigor we admire, but sometimes with a pertinacity that astonishes even his warmest friends. We see this in his discussion of the question of the communicability of puerperal fever. Probably no amount of evidence would convince Dr. Meigs that a puerperal fever has ever been communicated from one lying-in patient to another through the medium of the accoucheur; and on this point Dr. Ramsbotham, who honors Prof. Meigs by the dedication of the last edition of his treatise on Obstetrics, has remarked, "as this physician also *wholly rejects the doctrine of contagion in measles and scarlet fever*, we can scarcely fail to believe that his opinions, regarding the non-communicability of disease in any of its forms, are too deeply planted to be rooted out by any facts, or arguments, which it is in the power of either Nature or Philosophy to supply."

After such an expression from so generous and noble a friend and admirer as Dr. Ramsbotham, Dr. Meigs cannot charge us with unfairness or disrespect in this notice of his Letters. Indeed, we confess that we entertain a very high respect for the firmly expressed convictions and opinions of such veteran practitioners as Prof. Meigs and Prof. Hodge, however widely those convictions and opinions may differ from the popular doctrines of the day, and however contrary to science and reason may be the philosophy by which they are defended; for these convictions and opinions are the results of long-continued observation. This remark applies as truly to Dr. Meigs' views of treatment, as to his opinion of the non-communicability of puerperal fever. There are many facts connected with these subjects that are not completely conformable with any existing theories; yet such facts are not the less reliable and true. Such, for example, are some of the observations which have been made in the history of individual epidemics, as in the case of Dr. Rutter, of Philadelphia, of Drs. E. P. and H. N. Bennett, of Ct. (*N. Y. Journal Med., Vol. XI., p.* 30), and various hospital epidemics of puerperal fever. The same also may be said of facts observed in the treatment of puerperal maladies; one physician has found early and copious blood-letting the only remedy required, and the *sine qua non* of cure; another practitioner finds in mercurials, etc., the greatest success in treatment, while another employs opium in heroic measure, and in hospital service finds it to surpass all other remedial agents ever employed in the fearful endemics of lying-in wards, where phlebotomy and mercurials had previously proved surest messengers of death, rather than a means of cure.

Facts like these certainly appear to indicate that puerperal maladies are, under different circumstances, in different localities, and different seasons, by no means generically and constantly identical in type; and that, notwithstanding the fact that a local inflammation affecting some portion of the pelvic organs is the most characteristic pathological event in puerperal fever, each case and every epidemic of the disease requires special treatments adapted to the particular constitutional condition of the patient and the general constitution of the year. We have no doubt that Prof. Meigs has enjoyed eminent success in the treatment of puerperal inflammations by heroic blood-letting. He practices in the city of Philadelphia, and among a class of people who are well fed, and have a vigorous nervous system. He sees his patient at an early hour of an attack of the malady, and the vigorous onset that he then makes upon the disease is the only onset that should be made upon such an inflammation as puerperal peritonitis, when the lancet is the agent relied on. But this mode of treatment has often killed a far greater number than it has cured, in hospital service, and in certain epidemics of puerperal fever.

Nearly as much may be affirmed of the treatment by calomel, and probably this potent agent has been more grossly misused; but of opium, though less, perhaps, is known of its *modus medendi*, we certainly believe that a more favorable report will eventually be rendered than has yet been awarded in favor of any other remedial agent that has ever been resorted to. An interesting chapter on the mode of its administration, and some of the results, may be found in the last American edition of Dr. Ramsbotham's Obstetrics, from the pen of Prof. Alonzo Clark, of this city. This opiate treatment seems to be peculiarly adapted to hospital epidemics, as witnessed in the wards of Bellevue, in the service of Prof. Clark, and in the State Emigrants' Hospital, under Prof. H. G. Cox, while, in private practice, it has yielded the most highly satisfactory results. E. H.

ART. XIII.—*Traité des Fractures et des Luxations.* Par J. F. MALGAIGNE, Chirurgien de l'Hôpital Saint-Louis, &c., &c. Avec un Atlas de 30 Planches, 2 vols. J. B. Bailliere. Paris: 1847–1855... pp. 1950...

[*A Treatise on Fractures and Dislocations.*—By J. F. MALGAIGNE, Surgeon of the Hospital St. Louis, &c., &c. With an Atlas of 30 Plates, &c., &c.]

THE great work of M. Malgaigne, on Fractures and Dislocations, is at last completed. French surgical literature is deeply indebted to the author for his attempts to place his country on a level with the position which, as regards the subject under consideration, has been proudly occupied by Great Britain and Germany. With such models before him as the immortal treatises of Sir Astley Cooper and Adolph Leopold Richter, M. Malgaigne resolved that France should no longer remain *en arrière.* In 1847, he presented to the profession his first volume, which treats of Fractures. To this subject he devoted 842 pages, and the text was accompanied by 16 superbly executed plates. The second and last volume, on Dislocations, contains 1108 pages, and this subject is illustrated by 14 plates. Thus we have a treatise of nearly 2000 pages, and a collection of 30 plates, the latter standing unrivaled, and reflecting the highest credit on M. Delahaye, the artist, whose sketches have been chiefly taken from the three great museums of the French capital, viz.: the *Musée des Hopitaux;* the *Musée Dupuytren;* and the *Musée du Val-de-Grace.* In whatever collection he has been able to find any rare and important specimen, he has availed himself of it to enrich his Atlas: "*et c'est ainsi que j'ai eu à ma disposition plus de richesses que jamais peut-être aucun auteur n'en a possédé.*"—(p. 7.)

It has been his aim to guard against those imperfections which, in the form of *imaginary* lesions, disfigure certain works on the same subjects, and to give to his own the grand characteristic of "*la realité.*"

With the materials at his disposal, and the labors of his predecessors from which to profit, we have a right to expect a complete summary of the present state of our knowledge on the topics discussed in these comprehensive volumes. It is our purpose at present, to determine how far he has succeeded in the task assumed. And here, at the outset, we feel inclined to censure M. Malgaigne for the non-fulfillment of the promise made in his preface to the first volume, viz.: that instead of quoting in the text the various authors to whom he may have occasion to refer, he would at the close of the second volume append "*une bibliographie générale et raisonnée*," in which he would endeavor "tracer à grands traits l'histoire de l'art sur cette matière, de suivre le progrès des idées, la série des auteurs, la chronologie des grands ouvrages et de leurs principales éditions." No such addition as this is to be found in the second volume, but the names of the writers quoted, together with the titles of their special contributions, are recorded on the bottom of the same page. We pass over the first 13 pages, in which are discussed the etiology, varieties, and general symptomatology of fractures, and stop to ascertain the views of our author in reference to the formation of callus, a question which, as he justly observes, has been perhaps more frequently agitated and elicited more different views than any other in the whole domain of surgery. After reviewing the various theories which have been proposed, he thus gives us his views upon the subject:

"Callus is formed from plastic lymph, which lymph is probably secreted by the medullary tissue and by the periosteum, and perhaps by the fractured surfaces of the bone. This lymph becomes infiltrated in the adjacent tissues, but more especially in the periosteum and the medullary substance; blood-vessels now penetrate it, it becomes organized, and occupies the place of the effused blood which is absorbed. It is worthy of remark that a very large effusion of blood is an obstacle to the consolidation of the broken ends of the bone. This is the condition of things in simple fractures, or those not exposed to the air. In fractures complicated with a wound of the soft parts or suppurating surfaces, Hunter believed that union was effected by fleshy granulations developed on the broken ends of the bone, which granulations became at length transformed into osseous tissue. This opinion was embraced by Dupuytren, but to us it seems to have no foundation in facts. According to my observations on the human subject, coagulable lymph is effused only in parts not exposed to the air, and it penetrates even the interstices of the fragments, provided the air be excluded. Granulations form only on the suppurating parts, and instead of promoting consolidation they can only exist at the expense of the bone which they corrode, or which is absorbed where they are developed." (pp. 117–18.)

His views are further illustrated by an admirably executed delineation of a compound fracture of the tibia (Pl. 1., fig. 7). But interesting and important as is the question of the reparation of bone, our limits are altogether too brief to enter into a lengthy examination of the various doctrines which prevail on this subject, and we proceed to an investigation of the causes which are known to interfere with the process, and which result in the formation of false joints. Our author arranges these under the following heads:—1, Where the fragments are completely separated; 2, where they are connected by the fractured ends without any perceptible overlapping; and 3, where the bones are separated, and the bones are in contact only by their lateral surfaces. In endeavoring to determine the influence of age in producing this condition, M. Malgainge has found that, contrary to the commonly received opinion, old age offers the smallest number of cases; the greatest frequency being between the ages of twenty and thirty. About four years since, the writer had temporary charge of a patient, ninety-two years of age, with a broken leg, and, in this case, union became perfect in little more than the time ordinarily required. Among the numerous causes, which are accused of preventing the reparation of bones, the most frequent, according to M. Malgaigne, is the treatment adopted. The season, regimen, pregnancy, cancer, syphilis, scurvy, etc., etc., may produce the same effect; but injudicious treatment, such as the abuse of topical wet dressing, the premature, too tight, or prolonged application of bandages, the mobility of the fragments, etc., etc., is, in his opinion, the most common cause. No patient, under his own care, has ever been the subject of a false articulation.

Between a simple retarded union and a pseudarthrosis there is an essential difference, although the differential diagnosis is not always easy, and in some cases, even, is impossible. The most common cause of this retarded union is the obliquity of the fracture, and the separation of the fragments, or, it may result from the mobility of the parts. The indications of treatment will, of course, vary according to the nature of the cause by which the condition is maintained, although our author embraces all under the following heads:—1, The parts must be kept immovable for a sufficient length of time; 2, the fragments must be approximated by compression; 3, the vitality of the parts excited by local means; and 4, attention should be paid to the general health of the patient. In the diagnosis of false joint, Mr. Stanley, of St. Bartholomew's Hospital, London, attaches much importance to the pain which the patient suffers at the ununited part. In a clinical lecture, reported in the *Dublin Medical Press*, August 2, 1854, he remarks that this pain is " the best test that union is not completed."

The various methods of treatment, adopted for the cure of pseudarthrosis, are examined in the following order :—1. Friction of the ends; needles; the seton; the ligature; resection; rasping of the fragments; and, finally, cauterization. The merits of each of these are examined in detail. Notwithstanding the claims to priority, in the use of the seton, which has been asserted for Winslow and Percy, M. Malgaigne awards to Dr. Physick the credit of being the "fondateur de cette methode." As our readers are aware (vide Jan. No., 1855, pp. 134–35), the value of this method has recently been questioned by Prof. Brainard, of Chicago. Of the success of the seton, in many cases, there can be no doubt. That Dr. Physick, however, was correct in his views of the *modus operandi* of the seton, is by no means so certain. If the opinions of our author, to which we have already referred, be true, granulations on the ends of the bones (which, Dr. Physick supposed, became ossified) can exert only a pernicious influence on the process of the reparation. As the soft parts alone can furnish the materials for the formation of callus, observes our author, why should we attack the ends of the bones? The seton, in his opinion, should be left in the parts for the time only necessary to produce a sufficient *engorgement* of the soft parts—a period which varies from eight to fifteen or twenty days.

The subcutaneous scarifications of the fragments, recommended by Mr. Miller, of Edinburgh, it seems was proposed by Sir Charles Bell, and tried, unsuccessfully, by Blandin.

It is gratifying to observe, that the labors of our own surgeons, on this subject, have not escaped, as is too generally the case with French writers, the attention of our author. He has referred to the cases treated by Drs. Mott, the lamented J. Kearny Rodgers, Cheeseman, and he has availed himself of the writings of Norris and Heard. From the date of his publication of the volume on Fractures (1847), we could not expect to find a notice of the more recent methods introduced by Dieffenbach, such as the ivory pegs, the galvanic treatment of Mr. Burnam, blisters, or the bone-drill of Prof. Brainard. But as these have been reported in former numbers of this Journal, we must dwell no longer on this interesting practical question. When union cannot be effected by any of the plans of treatment above-mentioned, amputation may, in many cases, be avoided, by resorting to the mechanical means recommended by Prof. H. H. Smith, in a late number of the *American Journal of Medical Science.* But we must proceed to the consideration of fractures of particular bones.

Fracture of the Os Hyoides.—In the last number of this Journal (p. 152), a case of this exceedingly rare accident was republished from the *Western Lancet*, and which occurred under the observation of Prof. Wood, of Cincinnati. Our author refers to the examples reported by Orfila, Ollivier, Cazauvieilh, Lalesque, Dieffenbach, Auberge, and M. Marcenkowski, the latter being the only instance which has come to his personal knowledge. Ollivier d'Angers saw a case in which the fracture was the result of muscular contraction. A female, æt. 56, in falling, had her head violently thrown backwards; a distinct, crackling noise was heard, caused by the fracture of the great horn of the os hyoides. The prognosis, of course, varies, according to the complications of the fracture. In the patient seen by Ollivier, inflammation and suppuration followed, together with necrosis of the posterior fragment, which, at the end of three months, escaped through a fistulous opening. This latter speedily closed, but difficulty of deglutition, attended, at times, with pain, continued for several years afterwards. If no displacement exist, the principal indication in the treatment is to prevent and subdue inflammation. When the fragments are displaced, co-aptation may be effected, by passing the index finger into the mouth, and pressing the posterior fragment outwards, while, with the other hand, the displaced parts are brought into contact. M. Lalesque introduced the œsophageal tube, through which the patient was some days nourished; and, in his case, union did not occur under two months.

Fractures of the Spine.—Under this head we shall notice those cases only in which there is depression of the *arc vertebral.* Our author quotes from Paul d'Algina to show that, even at his epoch, it was proposed in such cases to remove the depressed fragment, an operation which M. Malgaigne characterizes as "*à la fois inopportune et dangereuse;*" inexpedient, because of its uncertain character; dangerous, because, if the dura mater be lacerated, air may be admitted into the arachnoideal cavity. The only case in which it would, in his view, be justifiable, is that in which there is an open wound, and the bone is *splintered.* He refers to an instance in which Louis operated in 1762, with great benefit to the patient. But, he asks, when consolidation has taken place with depression, and the paralysis would seem to be maintained by this compression, is it in the power of the surgeon to afford relief? On the affirmative side of this question, he quotes the case in which Dr. Alban Goldsmith operated, and which is reported in the *North Amer. Med. Surg. Journal*, July, 1829. But as he asserts, its details are so imperfect that it forms no criterion by which to judge of the real value of the operation. During the past winter the writer had occasion to resort to this proceeding in two instances. One case terminated fatally on the 8th day; the other was materially benefited, and is still gradually improving. The paralysis here was of about 5 years' duration, and at present, we will only remark, that the patient has had no reason to regret that he tried the chances of this inexpedient and dangerous operation.

Fractures of the Ribs.—In fulfilling the chief indication in the treatment of this accident, viz.: to secure the immobility of the bones of the chest, much mischief has often been the result of applying too severe constriction. Most of the bandages recommended encircle the whole thorax. To obviate the inconveniences resulting from these, M. Malgaigne has proposed thus to apply bands of sparadrap plaster: one end being placed on a level with the anterior extremity of the right seventh rib, it is passed around the left side of the chest, below the scapula, and over the right scapula, from which point it is made again to encircle the left side of the thorax, and so on, until it reaches the spine of the right ileum. In this manner, although seriously impeded on the left, respiration is perfectly free on the other side. If we mistake not, Mr. Hilton, of Guy's Hospital, is the author of a better plan. He applies strips of adhesive plaster, which extend from the spine, across the side affected, to the sternum. If there be deformity from displacement of the fragments, the action of these will be greatly improved by the addition of strips applied longitudinally. His clinical lectures on this subject were published, with illustrations, in the London *Lancet*, but at present we are unable to refer to the number, or even the year of publication. When complicated with extensive emphysema, the highest authorities have advised incisions into the pleural cavity, for the purpose of emptying the chest. This practice, however, according to our author, is both unjustifiable and dangerous. If confined to the trunk no treatment is necessary; even when excessive, simple punctures with the point of a lancet are sufficient to give exit to the air, or promote its absorption.

Fracture of the Clavicle.—We have heard surgeons, of the highest respectability, question the value of any of the methods commonly adopted in the treatment of fractures of the clavicle. They have boldly asserted, that as few instances of deformity are met with in which no treatment has been tried as in those where every precaution has been taken to guard against its occurrence. Unless more than ordinary anxiety be felt to obtain union without deformity, our author recommends that all the various forms of apparatus used should be discarded; but if perfect union be required, then he would enjoin upon his patient to remain on his back in the horizontal position for three weeks; the elbow should rest on the side or in front of the chest, the arm on the sound side be fixed, the head be retained immovable on the pillow, and finally the hand of an assistant should hold the broken ends in apposition. It is stated that this treatment was actually carried out by M. Mayor, in the case of a young lady at Berlin. Fox's apparatus, or Bartlett's modification of it, as published in the March No., 1855, of this Journal, would have enabled M. Mayor to have dispensed with the *hands* of his assistant, and would, in our humble opinion, be far more serviceable than the *double crochets d'acier, analogues aux pinces de Museaux*, suggested by M. Malgaigne.

Fracture of the lower end of the Radius.—If undetected, or improperly treated, this accident may seriously affect the appearance and utility of the forearm and hand. Pronation and supination, motion at the wrist-joint, retraction of the fingers, etc., etc., may all be the consequence. Our author asserts that, at the present day, the diagnosis is so easy, that the surgeon can have no excuse for an error in this respect. But we can notice only his views of the treatment of this accident. This varies according to the existence or non-existence of displacement. In the latter case two splints or the dextrine bandage are sufficient, but displacement adds the following indications: 1, to restore the interosseous space; 2, to remedy the posterior displacement of the lower end (or the anterior, if it exist); 3, to overcome the abduction of the hand by bringing the styloid process to its natural level. M. Malgaigne remarks, that he has found no difficulty in procuring union in these cases without stiffness at the wrist-joint, deformity, or any injury to the functions of the limb, except in those instances complicated with a true luxation of the ulna. He makes use of two lateral splints which act like the dorsal and palmar in opposing the backward displacement. In order to guard against interfering with the movements of the wrists or fingers, the splint does not extend below the first row of the carpal bones. The apparatus is permitted to remain until the 18th or 22d day, when the dressings are renewed. The method of treatment recommended by Dr. Bond, of Philadelphia, is that which is most in favor with American surgeons. His paper on this subject, with illustrations, was published in the *American Journal* *of Medical Sciences*, for April, 1852. Dr. Isaac Hays, the editor of that Journal has employed a simplification of Dr. Bond's splint with satisfactory results (vide No. for Jan., 1853). A piece of the lid of a cigar-box is carved, somewhat to the shape of the forearm, and it extends from the elbow to the distal end of the metacarpus; this is well padded with cotton, which is secured by a few turns of a roller. The body of the roller is then attached to the face of the palmar-end of the splint, and the apparatus is ready for use. The arm is then to be laid upon the splint, an anterior and posterior compress properly arranged, and the whole secured by a roller.

Fractures of the Neck of the Femur.—MM. Bonnet and Nelaton maintain that the majority of these fractures are without the capsular ligament; but, with Sir Astley Cooper, our author is of a different opinion. In proof, he furnishes statistics from the following collections:—

Dupuytren Museum, ...	32 Fractures.	20 Intra-Caps.
St. Bartholomew's Hospital .	12 "	6 "
College of Surgeons (Dublin) .	18 "	12 "
Richmond Hospital (Dublin) .	41 "	23 "
	103	61

Mr. R. W. Smith, in his *Treatise on Fractures in the Vicinity of Joints*, *etc.*, *etc.*, has given a table of all the specimens of fracture of the neck of the femur contained in the principal museums of Dublin, of which 79 were intra-capsular, and 61 extra-capsular. M. Malgaigne asserts that Sir Astley Cooper was in error in supposing that the former accident is confined, principally, to patients upwards of fifty years of age. Of 28 cases, in which the age was noted by Mr. Smith (op. cit., p. 108), 1 was 36; 2, 40; 1, 46, and 4, 50; in 20, the age varied from fifty-five to ninety years.

What are the elements of our differential diagnosis in these two forms of accident? According to our author, when there is no displacement, we have no other symptoms than local pain, and impaired motion at the joint. In displacement, we have pain, tumefaction of the soft parts, loss of power in the limb; shortening, elevation and disappearance of the trochanter major; eversion of the foot, and, lastly, crepitation. The value of each of these is discussed in detail, but we can only notice one, viz.: shortening of the limb. Sir Astley Cooper states, that this varies from one to two inches; Mr. R. W. Smith, that the *immediate* shortening varies from a quarter of an inch to one inch; M. Brun, from six to eight lines; and M. Rodet estimates it at eight lines.

"Thus then," says our author, "in a recent intra-capsular fracture, the shortening may vary several degrees, but the double resistance of the capsule and the trochanter minor prevents it from exceeding one inch" (p. 671).

In some cases, as is well-known, there is, at first, no shortening, which M. Malgaigne attributes to the fact, that the fractured part is impacted, or, to the resistance of the periosteum; at a later period, this resistance is overcome, by the injudicious attempts to move the limb, or, by the inflammation and absorption, excited at the seat of fracture. Mr. Smith ascribes this absence of shortening to the integrity of the cervical ligament, and the sudden occurrence of this symptom, subsequently, as is sometimes the case, to the accidental laceration of this ligament.

Intra-capsular fracture seldom unites by *bony* union. So firmly did Delpech, at one time, believe in the impossibility of this union, that he offered, if we mistake not, a premium of 2,000 francs, for a genuine specimen of the kind, and when this was produced, he very coolly claimed the prize for himself, on the ground of priority in the discovery! When our distinguished countryman, Prof. R. D. Mussey, during his visit to Europe, in 1830, presented to Sir Astley Cooper a specimen in which such union had occurred, Sir Astley at first remarked,—"This was never broken." After a close inspection, however, he was compelled to admit, that appearances did look a little more like it, but he did not think the fracture was entirely within the capsular ligament! This is, by no means, a very uncommon illustration of the maxim, that "les faits souvent se moutrent rebelles aux theories." We think there are few who, at the present day, would question the *possibility* of osseous union in the accident under consideration. That it is exceedingly rare, on the other hand, there can be no doubt. In the seventy-nine cases, collected by Mr. Smith, in one only did it take place, whereas, in sixty-one of extra-capsular fracture, it occurred in seventeen.

According to Mr. Smith, the deposition of callus, around the fragments, is not necessary for the union of the intra-capsular fracture, as it is generally effected by the direct union of the broken surfaces, which are confronted to each other. Of course, it is most likely to occur in the variety termed impacted fracture. In concluding our remarks upon the intra-capsular fracture, we will observe, that, although M. Malgaigne has prescribed one inch as the possible extent to which shortening can occur, in the table of cases collected by Mr. Smith, we find, in four cases, it is stated to have been two inches, and in one of these it was two and a-half inches. Our author is, besides, a believer in the possibility of bony union in this species of fracture, of three instances of which, he thinks, there can be no question. He does not agree, with Sir Astley Cooper, that the external fragment becomes, in time, absorbed, where union does not take place; but the inner fragment, owing to the great difference in vitality, may thus disappear.

Fracture of the Patella.—This, according to our author, is not a very common accident, but 45, out of 2328 cases of fracture, admitted into the Hôtel Dieu, having been of this nature. Hippocrates, Celsus, and Galen, make no mention of it, Soranus being the first to describe it. The influence of age, in predisposing to this accident, is most remarkable, for, in not a single instance, did it present itself under seventeen years of age, and M. Malgaigne has seen but one case, in a lad of eleven years. It is most frequent between the ages of thirty and fifty.

Transverse fractures are seldom produced by a direct blow on the part, without an accompanying fall. Boyer has reported a case, caused by the kick of a horse, but our author is not aware of any similar example. Violent muscular contraction, as is well-known, is the most common cause of this accident. Both patellas have thus been simultaneously ruptured, instances of which have been observed by Camper, Sue, Bichat, and Sir Astley Cooper. Does this form of fracture admit of osseous union? Pibrac denied the possibility of this, and even offered a prize to the one who should present him with a specimen of the kind. Instances of osseous consolidation have been seen by Camper, Sheldon, Boyer, and others, and M. Malgaigne himself has observed others, although the cases were not of a simple transverse fracture, but there was a small splinter of bone detached from one of the fragments. The almost constant absence of osseous union, in these cases, is due to the fact, that the plastic matter, secreted in part by the fractured surfaces, but more especially by the periosteum, cannot fill the interspace. In the majority of cases, quite an interval remains, but it is doubtful whether, in this condition of the parts, the use of the limb is not equal to that in which osseous union obtains.

Three methods of treatment have been proposed: 1st, to render the limb completely immovable; 2nd, to guard against stiffness of the joint, by moving the limb freely before the bond of union is complete; 3rd, there is the mixed method, which attempts to combine the advantages of both the others. Our limits will not allow us to enter into an examination of the merits of the different apparatus recommended by Bücking, Evers, Böttcher, Aitken, Lampe, Graefe, Morgridge, Sir Astley Cooper, Mayor, and others, and most of which may be found delineated in Richter's Atlas of plates. Our author says, that these are totally inadequate to secure osseous union, and to effect this he has contrived an instrument which embraces the broken fragments, and maintains them in coaptation as does the twisted suture the soft parts. At the date of the publication of the volume under consideration, M. Malgaigne had employed this in four cases, and with very gratifying results. As this instrument is a *gripe*, the points of which penetrate the flesh to the bone, it was natural to expect that it would produce severe pain, inflammation, etc., but these have been but trifling. Experiments made with it at the N. Y. Hospital proved that it was far less painful than might have been anticipated. Sometimes the surgeon is consulted in cases where considerable time has elapsed from the time of the accident, and the fragments are already joined by a lengthy bond of union, rendering extension of the limb impossible. John Hunter treated a case of the kind successfully, by directing the patient to move it frequently with the hands and to make efforts to move it by the *will.* Sir Astley Cooper succeeded in the same manner, in another case, where both patellas were broken. Again, the edges of the fractured surfaces have been made bare, and the parts maintained as nearly as possible in apposition. Some years ago Dieffenbach divided, subcutaneously, first the ligamentum patella, and afterwards the tendon of the rectus femoris, about three inches above the patella, so as to avoid the synovial membrane. M. Malgaigne condemns this proceeding, as, in his opinion, it may result in an infirmity equally grave, with a badly united fracture. In one instance, our author retained the fragments in apposition for forty days. The fracture had occured three months previously, but the patient derived no benefit from this treatment. He suggests, that advantage might be gained *by incising* the edges of the fragments with a tenotomy. As a last resource, he recommends, as the most simple and effectual method, to render the knee immovable by means of a hollow splint placed behind the knee.

We must now conclude our notice of the treatise on fractures. Whoever peruses it, cannot fail to be struck with the almost complete absence of illustrations of apparatus employed in the treatment of these accidents. In this respect it contrasts most strikingly with the work of Richter, and with most others with which we are acquainted. It would be superfluous for us to add our mite of praise to the volume under consideration, nor was it our intention, when we commenced, to dwell at any great length on a work which has now been for several years before the profession. In the next number of this Journal, we shall attempt a more critical analysis of the volume on Dislocations, which bears the date of the present year. G. C. B.

BIBLIOGRAPHICAL NOTICES.

Art. XIV.—*A Practical Treatise on the Diseases, Injuries, and Malformations of the Urinary Bladder, the Prostate Gland, and the Urethra.* By S. D. Gross, M.D., Professor of Surgery in the University of Louisville, etc. Second edition, revised and much enlarged, with one hundred and twenty-four illustrations. Philadelphia: Blanchard & Lea, 1855. 8vo., pp. 925.

The second edition of this excellent treatise is so much enlarged and improved that it has the character of a new work. About two hundred pages of new matter have been added to this edition, with a corresponding increase of illustrations. We shall limit our present notice of this work to some of the more important of these additions.

The sections on malformations, wounds, and lacerations of the bladder, are enlarged principally by the addition of cases. In speaking of the fatality of laceration of the bladder, the author changes the statement in the former edition, that, so far as he knew, there are only "two cases of recovery" from an injury of this kind upon record, to "scarcely half a dozen." The statement is undoubtedly truthful; but the facts are quite different, for there are now on record at least twice that number of recoveries. Dr. Gross seems to have been so deeply impressed with the fatality of this injury as to have left his former views of treatment, which were of no practical value, unimproved in the present edition. He does, indeed, approve the practice of Dr. Walker, the lateral operation as for stone, where the rupture occupies the "anterior and more accessible portions of the bladder," and for this very good reason, that the operator "thus not only secured a free outlet for the infiltrated urine, but prevented its further diffusion among the surrounding structures." If it is important to secure a free outlet when the rupture is in the external wall, is it not doubly so when the extravasation is into the peritoneal cavity? Most assuredly it is, unless we adopt the false premises of the author, that "in general, all the mischief that can be done is done in the first instance, by the escape of the urine into the peritoneal cavity." Cases are on record, in which the rupture into the peritoneal cavity has not been attended, at first, with severe symptoms; but the patients have progressively grown worse. In others, the autopsy has revealed slight evidences of peritonitis, and in a few, none, where the escape of urine from the bladder into the peritoneal cavity has been free for a week or more. We can but believe, that the formation of a channel direct from the base of this organ, externally, which would drain away the urine as fast as it escaped from the ureters, is of the utmost importance. It is folly to trust to a catheter to remove the urine, for the bladder, always contracting firmly, is more likely to expel its contents through the posterior rupture than its natural outlet.

The following entire sections have been added to this edition:

Fistula of the Bladder, which embraces the following different forms of fistulæ and their treatment:—Vesico-Vaginal, Vesico-Uterine, Vesico-Utero-Vaginal, Vesico-Vagino-Rectal, Vesico-Rectal, Vesico-Urachal, and Urethro-Vaginal. The principal authorities quoted are M. Jabert and Dr. Sims, and the operation of the latter is fully described and illustrated.

Varix of the Bladder.—This disease is due to a varicose state of the veins of the neck of the bladder, and is usually associated with calculus, or organic disease of the urethra, or rectum and anus. It has no characteristic symptoms, but may be suspected when the patient, laboring under calculus, stricture, etc., has frequent attacks of venous hemorrhage. It is to be treated by removing the cause, leeching, cold douche, rest, etc. A fatal case of hemorrhage, from this cause, recently occurred in Paris.

Inversion of the Bladder, and Protrusion of the Organ at the Urethra.—This abnormal condition is, of course, confined to the female. There are two varieties—the complete and incomplete—the former consisting of a protrusion of all the coats; the latter, of the mucous coat only of the bladder. It is caused by a relaxation of the coats of the bladder, and is to be diagnosticated from growths in that vicinity, prolapse of the rectum, etc. The treatment consists in cautiously returning the protruded portion, rest, and remedies appropriate to the existing state of the patient.

Morbid Sensibility of the Urethra: Heterologous formations of the Urethra, and Inversion and Protrusion of the Mucous Membrane of the Urethra are short but instructive sections.

Besides these additions of whole sections on new and important subjects, nearly every page bears evidence of a careful revision; and to many chapters of the former work large additions are made in this. For example, the section on *calculus* is extended about seventy pages.

These improvements we cannot further point out, and shall conclude with a reference to the Appendix, which is devoted to an inquiry into the frequency of urinary calculi in this and other countries.

United States.—Dr. Gross has taken great pains to collect facts in reference to the frequency of calculus in this country, and presents us, in this Appendix, the valuable results of his inquiry. It appears that the great stone regions are, as far as is at present known, Kentucky, Tennessee, Virginia, Ohio, North Alabama, and, perhaps, Missouri. Dr. G. can assign no cause for this difference of territory in the production of urinary calculi. It evidently depends neither upon climate, geological formation, nor habits of life. There is no essential difference in these respects between Indiana and Kentucky, yet stone is far more frequent in the latter than in the former. The food of the inhabitants of calculous regions does not differ from that used in some States where the disease is more rare; the same is true of the use of lime-water; still, Dr. Gross considers it extremely probable that food, drink, occupation, and climate, do exercise an important influence in the productions of this malady. The author gives, at length, the statistics which he has collected relating to the frequency of stone in the individual States. These facts are of great interest, and the profession is under lasting obligations to Dr. G., for his labors in this field.

It appears that calculous diseases are almost unknown in our navy. This confirms the opinion, now generally prevalent, that sea-faring people are very rarely affected with stone.

Canada and Nova Scotia.—These territories enjoy the same immunity from calculous diseases as the New England States. The concluding portion of the appendix is devoted to the statistics of calculous disorders in foreign countries, and forms, with the preceding, a valuable addition to the work.

From this brief notice, the reader will form a correct opinion of the comparative value of the present edition of Dr. Gross' work. As a treatise on the injuries and diseases of the genito-urinary organs, it has no superior. Full and complete in the history of each individual accident and disease—clear and practical in the details of treatment—this work leaves nothing to be desired in the department of practical medicine to which it is devoted. Again, it is strictly an American work; and however much it shall add to the fair fame of its distinguished author, it will contribute, powerfully, to the elevation of the medical literature of this country.

Art. XV.—*A Manual of Pathological Anatomy.* By C. Handfield Jones, M.B., F.R.S., and Edward H. Sieveking, M.D., Fellows of the Royal College of Physicians, and Assistant Physicians to St. Mary's Hospital, London. First American Edition Revised, with three hundred and ninety-seven Illustrations. Philadelphia: Blanchard & Lea, 1854. 8vo. pp. 733.

We have long had need of a hand-book of pathological anatomy which should thoroughly reflect the present state of that science. In the treatise before us, this desideratum is supplied. Within the limits of a moderate octavo, we have the outlines of this great department of medical science accurately defined, and the most recent investigations presented, in sufficient detail, for the student of pathology.

The first division of the work, on General Pathological Anatomy, is by Dr. Jones, and is occupied with the consideration of the morbid states of the blood, textural changes, new formations, parasites, etc. This division contains a very complete digest of our present knowledge of cancer.

The second division, on the Pathological Anatomy of the Nervous System, is by Dr. Sieveking. It embraces the pathology of the meninges of the brain, of its substance, of the spinal cord and its membranes, and of the sympathetic system.

The third division, on the Pathological Anatomy of the Organs of Circulation, is by the same author. In this, we have a careful survey of the pathology of the heart and its external and internal membranes, and the arterial, venous and lymphatic systems of vessels.

The fourth division, on the Pathology of the Organs of Respiration, is also by Dr. Sieveking, and forms one of the most important portions of the work.

The next division, the Pathological Anatomy of the Alimentary Canal, is by Dr. Jones. It embraces the mouth, œsophagus, peritoneum, stomach, intestinal canal, liver, pancreas, etc. The pathology of the urinary organs and joints completes the part which this author has contributed to the volume. The remainder, embracing the pathology of the female organs of generation and the osseous system, are by Dr. Sieveking.

We cannot, at this time, undertake a formal analysis of this treatise, as it would involve a separate and lengthy consideration of nearly every subject discussed. Nor would such analysis be advantageous to the medical reader. The work is of such a character, that every physician ought to obtain it, both for reference and study.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

SURGERY.

On Circular Cauterization of the Base of Hemorrhoidal Tumors complicated with Prolapse of the Mucous Membrane of the Rectum. By Dr. Alphonse Amussat, Jun.

[*Continued from Page* 121.]

The author then details a case of internal hemorrhoids, with prolapse of the mucous membrane of the rectum, treated with circular cauterization of the base of the most voluminous of the tumors, with a T-shaped porte-caustique forceps with projecting plates, and terminating in cure. The patient was a merchant, sixty-eight years of age, of temperate habits, but always subject to constipation. From the age of twenty-six he had suffered from hemorrhoids, accompanied by losses of blood, and it appeared that every two months he experienced a sort of very painful hemorrhoidal crisis, followed by a flow of blood which brought relief. During the last ten years the tumors had come down while walking or making efforts at defecation, and as the inconvenience and pain attending them continued to increase, Dr. Nacquart, on the 11th December, 1846, called in the author and his father. The operation was performed on the 14th, and lasted two minutes and a half; the following day there was headache and slight fever, which, however, soon passed away. On the 21st the shreds of the cauterized hemorrhoid had fallen off, the volume of the tumors becoming progressively less. On the 25th, notwithstanding the efforts the patient was encouraged to make, nothing was found in the situation of the cauterized hemorrhoid but a small, granulating, suppurating surface; the external tumors being, at the same time, very much flattened. On the 4th of January the patient informed his attendants that his efforts at defecation had ceased to be attended with any protrusion; he was able to sit and to walk for a long time without feeling pain, and the external swellings had almost disappeared. The author saw this patient again on the 8th of March, 1852; since the operation he had enjoyed a degree of health to which he had previously been a stranger, and the result of the cauterization had continued as just now described.

The second case described by the author, of which, as well as the remaining cases, we shall, as we have done in the preceding instance, give only an abstract, was likewise one of internal hemorrhoids, with prolapse of the mucous membrane of the rectum, and was cured by circular cauterization of the base of the tumors, with a porte-caustique forceps. It occurred in an attendant in a workhouse, aged forty-six, of strong constitution and good general health, except that he had always been subject to constipation, and had for the last fourteen years suffered from piles, with frequent pains about the anus, and discharges of blood at stool. The hemorrhoids had latterly greatly increased in volume, and came down when the bowels acted, bringing with them a portion of the mucous membrane of the rectum; so that the patient was careful to go to stool in the evening, because the tumors returned more easily during the night, while in the daytime he had much difficulty, and often failed in returning them; at such time the friction of the shirt caused great pain, and frequently the patient could scarcely sit down. His general health becoming impaired, he applied to the author's father, who, on the 1st of March, 1848, made a circular cauterization of the left half, circumscribing the base of the tumor with a T-shaped porte-caustique forceps with protecting plates, charged with Filhos' caustic, and placed as high as possible. The cauterization lasted about three minutes; the patient suffered little, and the cauterized hemorrhoid separated on the fourth day.

On the 15th of March, 1848, the patient was examined by MM. Lallemand de Montpellier, Beauvieux, Remondet, and Chaussat, who ascertained that but half of the hemorrhoidal swelling remained. This was removed by a second application of the T-shaped forceps, charged with caustic, and allowed to remain on for three minutes. On the 4th of April the mucous membrane of the rectum had ceased to come down; the linear cicatrix of the cauterized hemorrhoids was situated about the fifth of an inch above the orifice of the anus.

This patient was seen again on the 5th March, 1849. The cure was complete; he no longer suffered at stool, there was no hemorrhage, and the constipation had ceased. No trace of the hemorrhoidal tumors or of the mucous membrane of the rectum was perceptible externally.

The foregoing case affords an illustration of the difficulty we sometimes experience in forming an accurate diagnosis of the affection. In fact, on the first examination I made of the anal region, I thought the patient suffered from a simple prolapse of the mucous membrane of the rectum, and were it not for the abundant losses of blood he had, joined to his other antecedents, I should have thought that this was his disease. But on a second investigation, made after the administration of a purgative, the vascular element became much more apparent; there was no longer any doubt that hemorrhoidal tumors existed with prolapse of the rectal mucous membrane. We see from this how useful it is to examine patients after the administration of a purgative, in order to be able to establish with precision the diagnosis of the affection. As to the surgical treatment, it ought, I think, to be the same in both cases, as I shall show at the close of this essay.

The third case was one of—

Internal Hemorrhoids with Prolapse of the neighboring rectal mucous membrane; Circular Cauterization of the base of the most voluminous; Cure.—The patient, aged fifty-four, of strong constitution, had enjoyed excellent health to the age of eighteen years, when he got syphilis, for which he underwent a full course of treatment. At the age of nineteen, being garrisoned on the frontiers of Spain, he was attacked with intermittent fever of a tertiary type, which lasted eighteen months; from that period he enjoyed good health until he attained the age of forty, when he quitted active military service to enter an office under the Minister of War. This change of life was not advantageous to him, for in 1843 he began to experience general *malaise*, headache, oppression of the chest; he lost his appetite, became dyspeptic; suffered from severe attacks of pain at the anus, in the abdomen, and sometimes in the genital organs; he occasionally felt great smarting in the urethra while passing water. His motions became difficult and painful, and to relieve his sufferings he had frequent recourse to baths and lavements.

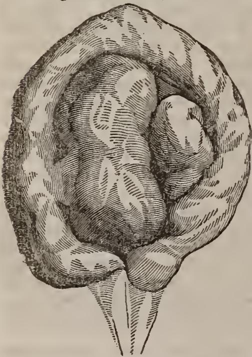
Fig. 6.

In 1848, the hemorrhoids, which had not hitherto appeared externally, began to come down; he lost blood at distant intervals, which gave him some relief.

In 1849, his digestion improved, but he lost blood every day, and was besides obliged to return the part every time he went to stool.

In 1850, the affection becoming worse, he could not go out, or walk without the inconvenience of feeling the hemorrhoids come down, and experiencing severe smarting; besides, the friction of the tumors against one another produced ulceration, and his linen was stained with muco-purulent matter. He was constantly obliged to return the hemorrhoids, which soon protruded again. In January, 1851, he came with Dr. Laurand to consult the author. A simple examination showed the existence of a large hemorrhoidal tumor, beside which was a smaller one; the epithelium was rubbed off for a certain extent at the point of contact of the tumors; there was, moreover, prolapse of the mucous membrane of the rectum, especially at the base of the more voluminous of the tumors. It was determined to cauterize the latter. The operation was performed on the 1st of February, and on the 10th the hemorrhoid, which was blackish and shriveled, separated. On the 13th, the patient was advised gradually to increase his diet; on the 14th he had a motion for the first time, and from this period he returned to his usual mode of life, resuming the duties of his office on the 16th. The cicatrization progressing slowly, he applied rhatany ointment to the anus twice a day, and was soon completely cured.

On the 13th of April, the author wishing to have a drawing made of the cicatrix left by the separated hemorrhoid, requested the patient to make every effort to bring it into view; but it was filiform and linear, and so difficult to see well on account of the mucous membrane at that side not coming down, that he had to renounce the design. The smaller hemorrhoid, which before was seen externally, scarcely appeared. The bowels acted every day without pain, and the patient was free from all inconvenience.

The author saw this gentleman again about a month before the publication of this essay, and ascertained that the result of the cauterization continued such as has just now been described. The patient's general health was remarkably improved, but he occasionally experienced a feeling of tension towards the extremity of the rectum, which he attributed to his sedentary life; the author advised him to take as much exercise as possible, and carefully to avoid constipation, which would very probably occasion the development of the small tumors which still existed.

The fourth was one of *Very voluminous Hemorrhoids, with Prolapse of the mucous membrane of the Rectum; Circular Cauterization of their base with caustic potash and lime; Cure.*—The patient was a Wallachian prince, aged 52, who had been operated on with the ligature for internal hemorrhoids by the author's father in 1836, and returned in May, 1848, laboring under the same affection. Since the former operation, new hemorrhoids had become developed, and produced great inconvenience. Efforts at expulsion showed the existence of two large hemorrhoidal tumors occupying the entire of the anal orifice, with decided prolapse of the mucous membrane of the rectum. One of the tumors was at the right, the other at the left of the anus; numerous hemorrhoidal vessels existed.

On the 6th of May, 1848, an operation was performed by M. Amussat, Sen., which consisted in seizing the right-hand tumor with his T-shaped porte-caustique forceps, so as to include not only the base of the tumor, but also the prolapsed portion of the mucous membrane; the instrument having been firmly placed, and the tissues sufficiently compressed, the round pieces were uncovered by giving a rotary motion to the protecting plates, and the screw was again tightened, so as to compress the tumor strongly. The operation lasted three minutes. The eschar became detached, and the cicatrix formed so quickly that on the 23d it was difficult to see it, on account of the retraction which the tissues of the right side of the anus had undergone.

The pathological state of the anal region appearing remarkable, the author obtained permission to have a drawing made of the remaining tumor.

On the 26th, twenty days after the first operation, the circular cauterization of the pedicle of the left hemorrhoidal tumor was performed in the manner just described. The pain was slight, and the patient felt so well the next day that M. Amussat found him in his drawing-room seated on his sofa.

On the 29th, an examination of the anus having been made after a motion, neither hemorrhoidal tumor nor prolapse of the mucous membrane could be discovered. The Prince soon after left Paris for Wallachia, completely cured.

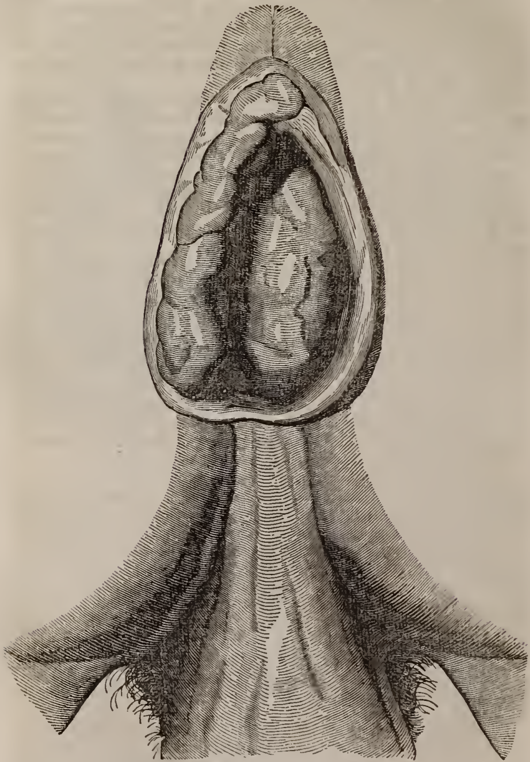

Fig. 7.

This plate represents the anus at the time of the second operation. The hemorrhoid of the right side, which has been cauterized, was as large as that which remains. There was a complete symmetry between the pathological production of the right and left sides. A sufficiently exact idea may consequently be formed of the original state of the affection, and the result of the first operation may be estimated with precision.

In the month of August last the author received a most satisfactory account of his patient; his general health was much improved, and he was in the habit of walking about three leagues a day. This exercise, of which he was completely deprived while he had the hemorrhoidal tumors, contributed much to the favorable state of his health, and the author was led to hope that new tumors would not become developed, although the affection under consideration is very common in the country the prince resides in.

The fifth case is headed *Voluminous internal Hemorrhoids, with Prolapse of the rectal mucous membrane; Circular Cauterization of the largest with my T-shaped porte-caustique forceps, with the grooves movable on their axes; Cure.*—Mr. S., aged forty-eight, came to consult me at the end of January, 1851, for an affection which, because her linen was constantly stained with purulent matter, she supposed to be a fistula. On carefully examining the affected parts, I ascertained the existence of two internal ulcerated voluminous hemorrhoidal tumors, with prolapse of the rectual mucous membrane, and some small varicose tumors at the edge of the anus; there was no fistula. The purulent discharge, which had deceived the patient as to the nature of her malady, came from the surfaces of contact of the hemorrhoids, which were superficially ulcerated. On questioning Madame S. as to the history of her case, I learned that, although of a delicate constitution, she enjoyed tolerably good health up to the time when the hemorrhoids had acquired some degree of development. She was the mother of four children, after the birth of each of whom she had hemorrhoids for a time, but then the affection rapidly disappeared, and did not return until the next confinement.

Each time that the hemorrhoids appeared under these circumstances they discharged much. In 1848, when she had been for several years free from them, they came on after much anxiety, and, in spite of the adoption of all ordinary means, they did not disappear; gradually they even increased in size. In 1849, they began to come down after each motion, and were always accompanied with discharge of blood.

In 1850 the affection advanced still further; the tumours became more painful and much more difficult to return. During the latter six months of that year the patient could not succeed in reducing them, with much pain and trouble, until two or three hours after each evacuation. Her digestion became more disturbed; she had frequent attacks of colic; her strength diminished so much that she was scarcely able to take any part in domestic matters; and she soon became unable to use anything but a little *café au lait* or very light soup. She then decided on consulting me, and on submitting to the operation I proposed to her.

On the 3rd February, 1851, in presence of Dr. Cruveilhier, Surgeon-Major of the 62nd regiment of infantry, I performed the circular cauterization of the more voluminous of the tumours, situated at the right of the anus, with a T-shaped forceps, made after the model of my father's, but with the grooved pieces movable on their axes, admitting of the caustic being covered and prevented acting until the moment it was thought advisable. The operation was performed as I have already described; the cauterized part was well washed with cold water, and smeared with olive oil. The patient took a bath, in which she remained for an hour and a quarter; on coming out of it warm poultices were kept continuously applied to the anal region. The smarting felt after the operation gradually subsided. The cauterized hemorrhoid had, on the 10th, completely disappeared: on the 12th, with the aid of a lavement, the patient had a motion, and passed a little blood. An examination made on the 22nd showed that, in addition to the disappearance of the cauterized tumor, the mucous membrane no longer protruded, and that the second tumor came down in a much less degree.

From this period Madame S. ceased to lose blood, or to have any purulent discharge; her digestion improved; the attacks of colic did not return. She still occasionally felt pains about the anus, but which were nothing in comparison to those she had before suffered. The following is the report of the 6th April, 1853:—The hemorrhoid of the left side comes down less than before the operation, and is no longer ulcerated; the small varicose tumors at the circumference of the anus seem to have increased a little in size; the right side appears as if there had never been either tumor or prolapse of the mucous membrane.

[*To be continued.*]

New Operation for Cleft Palate.—At the session of the French Academy, on the 26th February, 1855, M. Jules Cloquet read a memoir on a new procedure in cases of "abnormal divisions of certain organs, and particularly in those of the *velum palati.*" M. Cloquet proposes to render available the well-known contractile property of cicatricial tissues, as shown in the various deformities arising from burns and ulcers, by applying to the divided texture a series of cauterizations, commencing at one end of the division, and continuing them throughout its course as rapidly as the wounds, there made, heal and contract, thus gradually obliterating the deficiency. M. Cloquet recounts the difficulties and frequent failure of the old operation by suture, and furnishes the details of six cases of *fissured palate* successfully treated by the new method. The objection to the operation is the slowness of the process—but, on the other hand, there are claimed for it, certainty, simplicity, and readiness of application to the very youngest subjects, while the process of cure is accompanied with no restraint upon the patient, and does not interfere with her ordinary occupation. A cauterizing agent, the platinum-uin, heated reddish-white by an electric-current, is preferred to the hot iron, as being less likely to alarm the young patient, while it has the advantage of any chemical agent, in being more controllable as to the extent of its action. M. Cloquet proposes, in a second paper, to treat of the application of his method to the cure of ruptures of the peritoneum and of the recto-vaginal septum, and of certain varieties of fistula.—*Gazette Médicale.*

PRACTICAL MEDICINE.

Local Application of Copaiba in Cases of Blennorrhagia and Blennorrhœa.—Prof. Marchal, of Strasbourg, in a note to the *Jour. de Médecine et de Chirurgie*, gives the result of several years' experience in the employment of copaiba, applied topically. At first he injected the liquid copaiba into the urethra of males and females affected with blennorrhagia; his success was various, the remedy sometimes effecting a rapid cure, and again failing altogether. To obtain more constant results he determined to make a trial of the copaiba diluted with gum arabic, in the proportion of five parts of the former to eight of the latter, and to this add an hundred parts of distilled water. Injections, with this liquid, succeeded perfectly in a female suffering a urethral blennorrhagia, the discharge ceasing in a very few days; the results were equally satisfactory in the male. To avoid the irritation sometimes caused by the syringe, he at first used a catheter through which to make the injections, but subsequently introduced a catheter smeared with the emulsion, not penetrating to the bladder, and allowed it to remain, properly secured, thus giving the urethra a copaiba bath. The success of this treatment has been constant, without internal medication; the cure being effected in from five to eight days. In the majority of cases this treatment was not commenced until the acute inflammatory symptoms had yielded to the proper means. The success of this treatment led M. Marchal to employ the same remedy in vaginal and uterine blennorrhagia, and also to leucorrhœa, by means of injections thrown into the vagina and uterus; also with tampons smeared with the liquid placed in the former, and with the same invariably good results. Injections thrown into the uterus, in these cases, have not been followed by the accidents sometimes supervening upon this practice.

Prejudices against Vaccination during Epidemics of Small-pox. By M. Dalbin.—It seems to be a general opinion with the profession, that it is imprudent to practice vaccination upon persons living in localities where variola is raging. Physicians, who entertain this opinion, no doubt believe that, under these circumstances, the vaccine virus, instead of having a preservative character, possesses, on the contrary, a power of attraction, and that the disease, when attacking a person recently vaccinated, is almost always of the confluent variety. This opinion I have reason to regard as erroneous. Whatever be the condition of the person thus operated upon, he may be safely regarded as secure against contagion, from the moment there is observed, about the scarifications, a slightly-reddened elevation, indicating that the inoculation had succeeded. A long experience has firmly convinced me, that during epidemics of variola, inoculation by the vaccine virus is incontestibly the most certain of all prophylactic measures, not only in the case of children who have never been vaccinated, but also in persons who have been vaccinated six or eight years before. In the last epidemic, I repeated the operation in the cases of children, upon whom it had been practiced two, three, four, or five years previously, and with perfect success. In the numerous epidemics of small-pox that I have had to treat, I have never hesitated to vaccinate persons living in infected neighborhoods, whenever it has been possible for me to procure the virus; and in the course of a twenty years' practice, out of two thousand persons vaccinated, I have never but twice observed the two diseases developed simultaneously. My first observation was made in 1838. Several cases of variola had occurred in the *communes* of Saline; I proceeded, at once, to vaccinate a large number of persons, all of whom were fully protected, excepting Mary B——, a robust child of two years, who was attacked four days after the operation, and in whose case *desiccation* took place on the twelfth day. My second case is quite recent, having occurred in the month of May last. In this, the two affections presented themselves almost simultaneously, though the vaccination alone preserved its distinctive character—of the variola, there were only about fifty pustules, and the disease was remarkably mild. It is, then, as will be observed, extremely rare to see the vaccine and variolous virus developed together, and the dangers so much dreaded are, in consequence, purely imaginary.—*Rev. de Therapeut.*

Abscess following Scarlatina. By Dr. Roche.—On the 1st September, 1836, while attending a female named Maccard, I was asked to examine her little boy, aged eight years, who was then in the twelfth day of a scarlatina, complicated with severe sore throat. The little patient, at that time convalescent, had an abscess on the right side of the neck, which had opened, spontaneously, the preceding evening; the pus was escaping, with difficulty, through several openings, almost capillary in size; the abscess was of considerable extent—the throat in good condition. I proposed to incise the skin freely, in order to facilitate the flow of the pus; but the little patient refused so obstinately, that I forbore to insist, not anticipating what was presently to happen. Six days later, I was sent for in great haste, being told that the child was losing all his blood through the wound. I had scarcely commenced my preparations to depart, when a second messenger arrived, who informed me that, a large quantity of black blood had escaped from the wound, and that the patient had died in a syncope two hours after the commencement of the hemorrhage.

At the period of the above observation, I was aware of nothing analogous; but the medical journals have since mentioned two or three similar cases, all of which, if I mistake not, have terminated in death. As is well known, scarlatina is often accompanied by a severe sore throat, of malignant character, specific in its nature, with deep ulcerations destroying the tissues; it is not surprising, therefore, that the abscesses which follow should have the same character.

When an abscess occurs under these circumstances, the suppuration should be facilitated by means of poultices; and as soon as the pus has formed, exit should be made for it, by means of a large opening, while the action of the parts is modified by the application of nitrate of silver, powdered bark, tincture of myrrh, aloes, etc. In case of rupture of any considerable vessel, plugging with lint, dipped in some homostatic preparation, aided by moderate compression, appears to me the most rational means to be employed. In case the hemorrhage should persist, access should be had, of course, to the ligature; but as chloroform cannot be administered to a patient already exhausted, the application of a ligature will often be found difficult, in consequence of the cries and resistance of the child, which would render it difficult to find the vein in the midst of the disorganized tissues.—*Rev. de Therapeut.*

May Hydrophobia be produced by the Bite of an Infuriated Dog. By M. Baruffi.—A woman of 44 years, just convalescent from disease, wishing to drive away, from her children, a dog which had come to seek a shelter from the heat, in lying down at her door, gave the animal a kick. The dog, amazed, bit the remaining foot, and could only be driven by her threats and cries to loosen his hold. The wounds in the foot healed in thirty days, but were never free from a certain amount of uneasy sensation.

On the 20th Oct., 1849, about fifty days after the occurrence, a severe pain was felt, extending from the wounded foot in a straight line to the trochanter. In the mean time the cicatrices became swollen, and surrounded by a reddish brown areola, and the muscles of the thigh contracted spasmodically; during the night convulsive movements and groans.

On the morning of the 21st, violent suffocation, thirst, and uncontrollable aversion to liquids. When brought to the hospital she presented the same symptoms aggravated. Pulse tremulous, convulsions, violent effort of cough and spitting, to relieve the embarrassed throat.

Oct. 22d, same symptoms increased. 23d, features elongated, strength exhausted, delirium, muscles benumbed—all voluntary movements arrested, except the violent spitting, pulse feeble, respiration very short and noisy, with mucous râle—death.

It was, of course, desirable to ascertain whether the animal inflicting the injury was at the time diseased. It is very certain that he was not, if we may trust the statement of the unfortunate patient, who saw the dog quietly asleep a short time before being attacked, or that of the relative who often encountered him and saw him perfectly well so late as the 20th October.

M. Baruffi has no doubt that his patient died of Hydrophobia, communicated by the poison of *rabies canine.* He then seeks to explain the sudden and spontaneous formation of this agent by the influence of anger upon the nervous centres; and analogy comes to the support of his opinion. Examples are not rare, in medicine, of humoral metamorphoses under the influence of powerful nervous perturbation; sudden attacks of jaundice caused by fright; vomiting in some attacks of hysteria; fetid perspiration in some cases of convulsion and in epilepsy. In fine, the writer cites the experiments of M. Bernard, by which this physiologist has shown that, by irritating a certain limited area of the spinal marrow, the secretion of sugar in the loin is increased in a few moments. We might add to these examples that of certain nurses, where milk, suddenly altered in quality by an emotion of anger, or of fright, has produced convulsion, and soon death, in the infant.—*Gaz. Med.*

Slow Poisoning by Copper.—Dr. Corrigan reports (*Dub. Hospt. Gaz.*) several cases of poisoning by copper, which are remarkable for the extreme slowness of progress resulting from the gradual introduction of the poison. In many instances it was the result of handling old or dirty copper, on which the carbonate had been formed. It was the carbonate from which the poisoning proceeded, and in this there is an analogy with the salts of lead. He notices a peculiar feature in these cases, viz.: an edging of rich purple on the margin of the gums, of the incisor, canine, and bicuspid teeth of both jaws. This purple color corresponds, in situation, precisely with the coloring produced by lead, but the tint of color is so different as to decide at once whether it has proceeded from copper or from lead, for, while the color produced by lead is of a pure blue, that from copper is a well-marked purple, and even, sometimes, a reddish purple.

Treatment of Vaginitis.—M. Thiry prescribes, in the mild form of vaginitis, first, a bath and saline purgative; then, removing the vaginal mucus, he sprinkles over the inflamed surface finely powdered charcoal or Peruvian bark, and completes the dressing by isolating them by means of a tampon. The tampon is allowed to remain from three to five hours, and on its removal emollient injections are employed; usually, in about six days, the cure is complete. In acute vaginitis he employs the same treatment, but precedes the application of the absorbing powder with a rapid cauterization of the inflamed surfaces with the nitrate of silver. A single cauterization usually suffices, and the cure is complete in eight days. He also employs the cautery and absorbing powder in follicular vaginal inflammation, which is ordinarily observed at the neck of the uterus, and is characterized by red conical eminences, and abundant secretion.

Twins born at an Interval of Forty Days.—A case is related in *Ann. Méd.* in which a female, æt. 24, healthy, of regular menstruation, and primipara, gave birth, after a short and regular labor, to a fully developed but feeble infant, which died eight days after. The placenta was delivered by natural efforts. The abdomen did not, however, completely subside; active movements were still experienced by the mother, and neither lochial or lacteal secretion was observed. No other particular symptom was manifested until the fortieth day after the birth of the infant, when she gave birth to another, feeble as the first, but evidently having arrived at full maturity. The lochial flow and secretion of milk now appeared.

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

Remarks on the Treatment of Badly-United Fractures of the Thigh.—The following remarks are the conclusion of a paper on Badly-United Fractures, by Dr. Gurdon Buck, published in the *Transactions of the N. Y. Academy of Medicine:*—Accident must have early suggested to surgeons the mode of treating this class of deformities. Patients, in their first attempts to resume the use of a fractured thigh or leg, frequently re-fracture the newly united bone by accidental falls, and this is generally followed by a speedy re-consolidation of the fracture; sometimes this has proved an advantage, by enabling the surgeon to correct a defect in the original cure. This was illustrated in a recent case at the hospital. A young man, seventeen years of age, was treated during the summer of 1854 for a compound fracture of the left thigh near the middle. The wound complicating, the fracture became the seat of hospital gangrene, and prevented the application of any extension to the limb. The result was a shortening of one and a half inches at the date of his discharge on the 3d October. On the 25th of the same month, and nearly sixteen weeks after the first fracture, he was admitted again with a re-fracture, caused by an accidental fall. There being now no external wound to interfere with the treatment, constant extension was applied, and speedy re-consolidation effected, with only half an inch shortening.

When the interval since the fracture is not too long, and the ends of the fragments are still movable, extension alone may serve to elongate the limb sufficiently. If, however, after a few days' trial, no material advantage has been gained by stretching the callus, there should be no longer delay in rupturing it. The method of operating employed in the above cases has proved safe, and it is believed it may be resorted to with very little risk of injury to the soft parts. By keeping the limb powerfully on the stretch while flexion is made, the ends of the fragments cannot be protruded far towards the surface in any direction. The inflammation and swelling following the operation, if any, are so slight as not to interfere with the immediate application of the apparatus for maintaining extension.

An important practical question in relation to this subject is, what interval of time may elapse within which it is admissible to resort to this mode of treatment? Guided solely by the consideration of the time required by the callus to become consolidated, we should be restricted in the application of our treatment to much narrower limits than clinical experience would impose. There is considerable discrepancy among authorities on this point, their views being influenced by the mode of treatment which they advocate. Some advise extension alone, with the view of stretching the callus, and discard altogether the operation of rupturing. Dupuytren, who advocated extension without rupture, fixed the sixtieth day as the ordinary limit, though he admitted that, in exceptional cases, it might be considerably exceeded. Æsterlen (cited by Laugier, *Thése sur les cals difformes*, etc., etc., Paris, 1841), an advocate of re-fracture, places the limits at six months to a year for adults, and at a longer period for children. Prof. Velpeau (*Médecine Opératoire*, 2d edition, T. 1, pp. 604, 605) divides deformities consequent on fracture into two classes: 1st. Where there is shortening alone of the limb, with overlapping of the fragments. 2d. Where there is angular deformity. In the first case, he thinks that re-fracture should not be attempted beyond the third month, for fear of fracturing the bone elsewhere; or, in case of separating the fragments, their cicatrized extremities should fail to reünite after being brought to confront each other by extension.

Our Case No. V. is an example of successful re-fracture beyond the limits prescribed by Velpeau, and the subsequent rapid re-consolidation of the fragments shows that the fears of non-union are not always confirmed in practice.

There is still less ground for fear of non-union, if we consider that, after refracture of a callus of so long standing, it is seldom practicable, and never necessary, to employ extension to such a degree as to confront the ends of the fragments. If the amount of shortening be reduced to one inch, or even one inch and a half, there still remains sufficient overlapping of the newly ruptured surfaces to effect a union, and also to secure to the patient a useful limb, with little or no halting in his gait.

In his second class of callus with angular deformity, Prof. Velpeau advises re-fracture of the callus at any period of its existence, however remote, and relates the case of an adult patient with an oblique fracture of the femur, that had united with a shortening of five inches, who, by an accidental fall, re-fractured the callus ten months afterwards, and recovered in two months, with only one inch shortening.

Catheterization of the Air-Passages. In our last issue we published an abstract of the report of the majority of the special committee of the Academy of Medicine, "On Catheterism of the Air Passages." Since that date the minority report, signed by B. FORDYCE BARKER, has been laid before the Academy, and the following abstract embraces its chief points of interest.

"The conclusion of Dr. Green's paper contains the following three distinct propositions:

1*st. That direct medication of the lungs, by means of catheterism of the air tubes, has not before been accomplished.*

2*d. That the operation may be performed by the dexterous surgeon with ease and facility, and with perfect safety to the patient.*

3*d. That the results of this method of treating disease, whether it has been employed in bronchial affections or in the commencement of tuberculosis, have already afforded the most gratifying indications that practical medicine will be greatly advanced by this discovery.*

This condensed summary of the paper referred to the committee seems necessary, in order clearly to define the duties of the committee.

The Committee were appointed "to inquire into and investigate the treatment proposed by Dr. Green in his paper," read before the Academy, Dec. 6th, 1854. That treatment is the injection of nitrate of silver into the bronchi, and "under favorable circumstances," into tubercular cavities. I now proceed to what I consider to be the legitimate duty of the committee.

1st. To ascertain whether direct medication of the lungs, by means of catheterism of the air tubes, has been before accomplished. On this point little need be said, as I presume the Academy and the committee will unanimously concur in the statement, that, in the history of medicine, there is no evidence that this has ever before been accomplished.

2d. To ascertain whether "the operation may be performed by the dexterous surgeon with ease and facility, and with perfect safety to the patient." The operation consists of two parts—1st, the introduction of an elastic tube through the vocal chords in the trachea. 2d, the injection, by means of a small syringe, of a solution of nitrate of silver, through the tube into the bronchi. The latter part of the operation can, of course, be accomplished with ease and facility. The first part, then, only requires examination, and this is not new to medical science. One of the "conclusions" of the report of the majority of the committee is, that "catheterism of the air-passages dates its history from the time of Hippocrates." * * * * But I am ignorant of the data upon which the committee base such a conclusion. Hippocrates (*de Morbis, lib. III.* 10) gives the following advice: "Fistulæ in fauces ad maxillas intrudendæ, quo spiritus in pulmonem trahatur." "Canulas should be carried into the throat along the jaws, so that the air can be drawn into the lungs." But M. Sestier (*Traité de l'Angine Laryngée Œdemateuse*,") has shown that it is very doubtful whether the ancients really did pass the sound into the trachea. He remarks that *αυλίσκος*, diminutive of *αυλος*, sound, means a small sound, and that under the denomination of *φαρυγξ*, the ancients meant sometimes the *throat*, sometimes the *pharynx*, and sometimes even the *larynx*. Hippocrates then advises the introduction of small sounds, but whether into the *throat*, *pharynx* or *larynx*, it is impossible for us to decide. At all events, the practice was altogether abandoned when Asclepiades proposed bronchotomy. It was almost lost sight of when Desault, in 1801, revived it, since which time it has been really introduced and left for a longer or shorter time *in the larynx and trachea*, and we have recorded in the annals of science many cases where the tube has been passed into the trachea as a remedial measure in the cases of impending suffocation. Prof. Lallemand resorted to this method in two cases, one of which is reported by Dr. Sestier, and the other by Dr. Justin Benoit. The latter also operated in this way in one case of his own. Desault reports three cases, Giraud two, Bichat one. Another case is reported by Desault as occurring in the Hospital of Lyons, in which a soldier, who had attempted to kill himself, was *nourished* and *breathed* fifteen days by means of two sounds, one introduced into the *œsophagus* and the other into the *larynx.* A sufficient number of cases have been enumerated, to establish the fact that this part of the operation can be performed by the dexterous surgeon with ease and facility. Mr. Ryland, who is alluded to in the report of the majority of the committee, thus speaks of the introduction of a tube into the trachea. "The idea of the aperture of the glottis being closed by the abasement of the epiglottis upon it, has long since been exploded, and it is now well known that a tube, passed in the manner just indicated, will, if directed by a scientific hand, readily find its way into the trachea."

With such ease and facility does the tube pass into the trachea, that it often occurs as an accident, where the intention of the operator has been to pass it into the œsophagus, and this, too, with a tube much larger than those Dr. Green makes use of. Dr. Watson, at the last meeting of the Academy, mentioned one case of his own, where this happened in one fourth of the operations, if I correctly understood him.

The experience of Dr. Watson is confirmed by many other surgeons. There are cases recorded where the tube has been introduced into the trachea, and produced so little disturbance that the operators have believed it to be in the œsophagus, and injected liquids into the air-passages, thus producing most unfortunate accidents, and even fatal results. It is sufficient for me to refer to a Thesis by M. Prus, Paris, 1817, No. III. p. 26., to the articles by M. M. Thoré and Baillarger, in the *Annales Medico-psychologiques*, T. V. et VIII. So well is this known to surgeons, that Prof. Miller, of Edinburgh, in his standard work on the "Practice of Surgery," gives especial directions to prevent the occurrence of such a mistake. The following are his words :—" In most cases, it is well to assure ourselves fully that the tube is in the œsophagus and not in the larynx, before fluids are passed downwards into the stomach. For this purpose a sheet of paper may be placed before the face, with the extremity of the tube projecting through it, while in front of the tube a lighted taper is put, which by the paper is effectually secured from the flatus of the nostrils in expiration. If, on expiration, the flame remains steady, no air impinging on it, we may proceed with the injections, the tube is certainly in the right place. If the flame be extinguished or even made to bend considerably, it is equally plain that an error has been made, and that injection would almost certainly occasion fatal asphyxia." The facts above mentioned conclusively *prove that the absence of the "rational signs" as given by the committee*, is *no evidence that the tube is not in the trachea, and that when the committee have decided on these grounds that an experiment was unsuccessful, their decision is wholly unreliable.* * * * *

3d. The *therapeutic results* of this method of medication. No one fact is better settled in the science of therapeutics, than the effect of nitrate of silver on inflamed mucous membranes. The pathological condition of the mucous membrane of the air-tubes, in chronic bronchitis and in the bronchi leading to tubercular deposition, is equally well established. Most physicians accustomed to treat pulmonary diseases, must have had, in the course of their practice, some such ideas as are happily expressed in the following quotation from Dr. Chambers, a distinguished physician of London:—"While treating disease in those parts of the mucous membranes which are sufficiently exposed to sight and touch, for the immediate application of remedial agents, there are few to whom the wish has not occurred that equal facilities were afforded of directly influencing the deeper seated continuations of the same fibre. The powerful remedies which restore so rapidly to health the conjunctiva and the fauces, would probably act with equal quickness and success on the stomach or the bronchi, could we apply them rightly to the right spot, and attack the local disease, without passing circuitously through the whole system."* *A priori*, then, we should look for most favorable results from this method of medication as meeting a "general indication, which the judicious practitioner will know how to avail himself of."†

The writer of this report has abundant proof that the results of experience fully confirm the expectations founded upon analogy and inductive reasoning. He has availed himself of every opportunity to watch the effects of the treatment now under discussion. He has examined a large number of patients, has learned their characteristic symptoms, and has watched their progress from day to day. A report of this character cannot be burdened with a minute record of individual cases. General results only can be stated. The use of the injections has uniformly been followed by a marked decrease in the cough and expectoration. A large proportion of the cases were those of chronic bronchitis. There were some of early and some of advanced phthisis. In all the cases of bronchitis, the patients began to improve as soon as the injections were used. Many of them recovered with a rapidity which I have never seen under any other treatment. In early tuberculosis, especially when complicated with bronchial disease, (as it usually is), this method of topical medication has produced the most gratifying results, diminishing the cough and expectoration, relieving dyspnœa, and allaying pain in the chest when present. In several prominent cases, the details of which, at some future time, will be given to the profession, the disease appears to be arrested. Time, of course, must determine this point. In some advanced and hopeless cases of phthisis, the injections have, for a time, greatly diminished the cough, expectoration, and irritation about the chest, and some of these patients and their friends have repeatedly declared that they invariably rested better after an injection.

In conclusion, the minority of the committee would suggest, for the acceptance of the Academy, the following propositions:

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* Lond. Lancet, (Am. Ed.,) 1849. Vol. 10. p. 29.

† The Path. and Treat. of Tuberculosis. By John Hughes Bennett, M.D., etc., p. 140.

1st. Direct medication of the lungs, by means of catheterism of the air-tubes, was first proposed and carried into effect by our associate member, Dr. Horace Green.

2d. The operation may be performed, by the dexterous surgeon, with ease and facility, and with perfect safety to the patient.

3d. The results of this method of treatment, whether it has been employed in bronchial affections or in the commencement of tuberculosis, have already afforded the most gratifying indications that practical medicine will be greatly advanced by this discovery.

[The papers of Dr. Green, the reports of the committees, and the detail of the experiments performed, were ordered to be printed as part of the transactions of the Academy. At the meeting in July, the subject came up for discussion, but nothing new or important was elicited, and the whole matter, by a unanimous vote, was laid on the the table.—Eds.]

MISCELLANEA.

Medical Schools.—Session of 1855–6.—Before our next issue, most of our medical schools will have commenced their annual sessions, and we take this occasion to notice the changes which have been made in those whose announcements appear in our columns:

College of Physicians and Surgeons, Corner of Twenty-third-street and Fourth Avenue.—Within a few months, this school has met with a severe loss, in the death of Professor Elisha Bartlett. The changes in the faculty, which we noticed last year, as incident to the inability of Professor Bartlett, from ill health, to deliver his course, are, this year, to be permanently settled. Prof. Smith will give the course on Materia Medica; Prof. Clark that on Pathology and Practice; and Prof. Dalton that on Physiology.

The removal of this college from its former, almost inaccessible, location, to its present highly eligible building and central situation, must have a very decided influence upon the prosperity of the school. It will be located in the pleasantest portion of the city, easily accessible, and within a few minutes' walk of Bellevue Hospital.

University Medical College, No. 107 *Fourteenth-street.*—This is the second medical college, in age, in this city, but the first in the number of its students and annual graduates. It has a very central location, from which the different hospitals are easily reached. Its museum is rich in anatomical and pathological illustrations, and its faculty embraces some of the most eminent names in the medical profession. No changes have occurred in this school during the year.

New York Medical College, East Thirteenth-street, between Third and Fourth Avenues.—Some important changes have taken place in the faculty of this school, within the last year. Prof. Horace Green has resigned the chair of Theory and Practice, and received the honorary appointment of Emeritus Professor of the same branch. Henry G. Cox, M.D., has been elected to the Professorship vacated by Prof. Green. Prof. Peaslee and Prof. Parker have exchanged Chairs—

the former having now that of Physiology and Pathology, and the latter General, Descriptive, and Microscopic Anatomy.

This is the youngest medical school in the city, but it bids fair to become a formidable rival of its sister institutions. Its faculty, as at present arranged, constitutes an able and efficient corps of teachers, and who, by their connection with hospitals, can afford to pupils every needful advantage for clinical studies. It has, also, an admirably selected museum of wax preparations, which illustrate every branch of healthy and morbid anatomy.

Medical Institution of Yale College.—The faculty of this school remain unchanged since our last notice.

Castleton Medical College.—No changes have occurred in this school during the last year.

Nashville Medical College.—This vigorous school, located in one of the most liberal and enterprising Southern cities, is rapidly advancing to the front rank of similar institutions. Its claims to the attention of Southern students are well founded. Its faculty remains unchanged.

Buffalo Medical College.—The only change in this college, since our last notice, is the resignation of Prof. MOORE, and the appointment of SANFORD B. HUNT, M.D., to the Chair of Anatomy thus vacated.

Geneva Medical College.—We noticed this College last year as a revival of the old school of that name. The session of last year, we learn, gave gratifying evidence of success, the class being respectable in size and character. The changes in the faculty since the last session will materially tend to strengthen the school. They are as follows:—PROF. HYDE takes the chair of Surgery; GEORGE BURR, M.D., is appointed Professor of Obstetrics, Diseases of Women and Children, and Medical Jurisprudence; CALEB GREEN, M.D., Professor of Materia Medica and General Pathology; and JAMES H. JEROME, M.D., Professor of Anatomy and Physiology.

Philadelphia College of Medicine.—This is among the younger medical schools of Philadelphia, but it is not the less worthy of the attention of the student who repairs to that city for instruction. Its faculty embraces the names of men long known as successful medical teachers, and which cannot fail to give character to the school. It has two sessions in the year, which gives it additional advantages as a school for students.

For further particulars in regard to these schools, we refer to our advertising sheet.

Annual Reports of the Hospitals, Dispensaries, and Public Charities of New York City.—There is probably no city in the world which is laid under greater contribution, for the support of purely benevolent institutions, than New York. We refer, in proof, to the immense number of foreigners which the following statistics show annually throng our public institutions. It is right and proper that we should support liberally our native pauper population, which would indeed be a light tax comparatively, but it is asking too much that we should be required to erect and endow asylums at an annual expense of hundreds of thousands of dollars for the protection and support of foreign paupers.

New York Hospital Report for 1854.—The establishments in charge of the Governors of this Institution are, the Hospital on Broadway and the Bloomingdale Asylum for the Insane. The Hospital was chartered as early as 1771, and is one of the most important, both from age and the perfection of its arrangements, in this country. The following are the statistics of these Institutions for the last year:

	Number treated.	Died.	Ratio of Mortality.
New York Hospital, - - - -	3,680	373	10½*
Bloomingdale Asylum, - - -	248	26	

Annual Report of the Commissioners of Emigration for the year 1854.—This Board was created in consequence of the immense foreign emigration to this port. Previously to 1847, the date of its organization, the foreign pauper was a tax upon the city. So great had the burden become to the tax-payers, that the Legislature of 1847 imposed a tax of $1.50 for every emigrant arriving at this port in a vessel from a foreign country, and placed the fund thus acquired in the hands of this Commission to indemnify the several cities of the State upon which the emigrant became a tax. The amount thus received last year was $633,210. The Institutions under the charge of this Commission are the State Emigrant Hospital, on Ward's Island, and the Marine Hospital, on Staten Island. These institutions are, therefore, self-supporting. The following is their exhibit for the year 1854:—

	Number Treated.	Died.	Ratio of Mort.
Emigrant Hospital, .	15,861	1438	9 1-15
Refuge Department, .	13,806	269	1 9-10
Marine Hospital, .	4,762	909	19 1-10†

Sixth Annual Report of the Governors of the Alms-House of New York, for the year 1854.—From this report we gather the following facts in reference to the condition of the institutions in charge of the Governors of the Alms-House for the year 1854.

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* There were 156 cases of death from casualty, which, being deducted, makes the per centage 6 3-20.

† The high rate of mortality in this Hospital is due to the fact that it receives contagious, infectious, and other diseases of a fatal character. Thus it appears that there were of cholera 650 cases, and 314 deaths; yellow fever 45 cases, and 20 deaths; Chagres fever 271 cases, and 26 deaths; typhus fever 1087 cases, and 99 deaths; variola 843 cases, and 80 deaths; moribund, 118 cases. Excluding this class of diseases and the mortality is about 10·53 per cent.

	Whole No. Under treat.	Admitted.		Died.	Ratio of Mortality.
		Native.	Foreigners.		
Bellevue Hospital, .	7,033	925	5288	725*	10 1-2
Penitentiary " .	4,058	880	2864	144†	3 1-3
Small Pox " .	210	112	73	40	14 7-10
Alms-House " .	4,724	...	....	288†	4 7-10
Work-House " .	1,681	...	....	67†	4 1-3
Colored Home .	917	...	....	138	....
" Orphan Asylum	150	...	....	21	....
Lunatic "	1,028	97	389	190‡	18
Nursery Hospital .	2,199	891	494	208	9

New York Eye Infirmary, No. 97 Mercer-street.—Thirty-fourth Annual Report.—This institution was organized in 1820, and has been one of the most efficient charities in the city. We are glad to learn from this report, that the Infirmary is soon to realize the advantages of a better location and a new building, through the liberality of the Legislature and private subscriptions. The following is a summary of its last year's operations:—Total number of patients, 3,000; natives, 1,049; foreign, 1,951; diseases of eye, 2,635; ear, 365.

New York Ophthalmic Hospital—Second Annual Report.—This Institution was incorporated in April, 1852, and opened in the following month. It is located at No. 6 Stuyvesant street, a point easy of access to students attending the different colleges.

The surgeons of this Hospital have formed a class of students and graduates, in medicine, for the purpose of clinical instruction, and we are glad to learn that this "Ophthalmic School" has been eminently successful. The number in attendance last year was sixty-five, each of whom received, at the conclusion of the course, an engraved certificate, signed by the officers of the Institution. During the past year, 1854, 1234 patients have been under treatment, classified as follows: Lids and Lachrymal organs, 310; Conjunctiva, 502; Cornea, 206; Coats and Muscles of Eye, 20; Pupils, Lens, Optic Nerve, 116. The medical officers of this Hospital are Drs. Mark Stephenson and J. P. Garrish.

Dispensaries of New York.—While examining the annual reports of the several dispensaries of this city, for the purpose of exhibiting their operations, we found, in the report of the Eastern Dispensary, the following brief history of these institutions, with their annual statistics, so admirably arranged that we shall copy them. It is but justice to add, that the present report of the Eastern Dispensary is a document of great value, abounding with useful statistics of general and local interest, and reflecting creditably upon the liberality of the trustees. It contains also a complete exhibition of the operations of the excellent system of vaccination recently adopted in that institution, the credit of originating and perfecting which is due to Jonas P. Loines, M.D., the vaccine physician, an able and enlightened statician:—

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* One-third from phthisis; cholera, 55.

† Cholera, 298 cases; deaths, 110; ratio of mortality, 39 4-5.

‡ Cholera, 83; deducting this number and the ratio of deaths is 10 per cent.

"The Dispensaries of the city of New York, though performing public functions, are private in their origin, and, as to the sources of their means, subsisting, in fact, wholly upon donations, and such small income as their economy in past years enables them to derive from funds invested. The present number of institutions, bearing this name, is five, viz.:—The New York, the Northern, the Eastern, the Demilt, and the North-western. In former times, even after New York had become a great city, a single Dispensary, "The New York," performed all the public gratuitous medical service which its existing limits required—that is, all that kind of medical service which is now received at the hands of the Dispensaries. It was established in 1790, its care embracing the whole city, and its field of operation even then not as extensive as the bounds of its present district. Thirty-seven years after its foundation, in the year 1827, it, for the first time, began to share its duty with a similar institution, the Northern Dispensary, the outward boundaries of whose district were Spring-street, Broadway, Fourth Avenue, Fortieth-street, and Hudson River, but since somewhat reduced.* This, it will be perceived, includes the populous settlement of Greenwich village and parts adjacent, that well-known quarter in which our great city first showed its expansive proclivities. Four years after the establishment of the Northern Dispensary, in the year 1832, the Eastern was founded, appropriating within its district all of the city lying east of Pike and Allen-streets, and First Avenue to Fourteenth-streets. Nineteen years after, in the year 1851, the Demilt followed, occupying as the field of its care all of the city lying above Fourteenth-street to Fortieth-street, with the Sixth Avenue for a western boundary line; all lying west thereof, also from Fourteenth to Fortieth-streets, being subsequently placed under the supervision of the North-western Dispensary which was founded in 1852. Fourteenth-street is, therefore, the base line of two Dispensary Districts, and the northern limit of three.

The New York Dispensary, as we have seen, was the parent Institution; it included among its earlier Physicians and Surgeons many whose names have become eminent in the annals of the city. The lists of Consulting Physicians and Surgeons of the several Dispensaries still chiefly embrace these names, and it would not do justice to the interest which they constantly display to assert that their positions are merely honorary.

The City Dispensaries are all formed upon the same general plan, and, as the most cordial and fraternal relations subsist between them, they work in harmony, and for measures of individual good, in concert. To render more palpable what good they annually do, so far as it may be expressed in figures, the following statistics, compiled from authentic sources, are subjoined; they are for the twelve months ending January 1st, 1855.† It will be seen that they carry their own comment with them.

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* Spring-street, Broadway, Fourteenth-street and the River, are the present boundaries.

† Unfortunately the Annual Returns of the several Dispensaries are not made up to one uniform date, or this table could be officially prepared every year.

Statistics of the Five Dispensaries of New York, for twelve months.

Name of Dispensary and Date of its Incorporation.		PATIENTS WHERE TREAT'D		Grand Total.	NATIVITY OF PATIENTS.		No. Vacci-nated.	Deaths for the Year.	Pre-script's dis-pensed.	Aver'ge cost of service to each pati'nt*
		At the Disp'ry	At their Dwel'gs		United States.	For'ign Cou'trs				
New York, A.D.	1790	38,069	7,983	46,052	11,076	34,976	3.538	294	112.570	10⅓ cts
Northern "	1827	8.421	4,449	12.570	4,522	8,048	1.447	80	26.952	25½ "
Eastern "	1832	18,194	2 737	20,931	8.516	12.415	2.952	123	26.995	13⅓ "
Demilt "	1851	11,457	2.710	14.167	4.732	9,435	1.405	181	24.482	27 "
N-western "	1852	6 555	2.709	9.264	3.647	5.617	936	131	16.350	27 "

Patients treated at the Dispensary, 82,396.
Patients treated at their dwellings, 20,588.
Whole number of Patients treated, 102,984.
" " " of American birth, 32.493.
" " " of Foreign origin, 70,491.
" " of persons Vaccinated for twelve months, 10,278.
" " of patients who died, 809.
Whole number of prescriptions dispensed, 207,349.

General average cost of medicine and medical services to each patient, 16½ cents."

There is one reflection which this interesting table suggests, and it is this:—Our dispensaries are all supported by public and private donations, a very precarious source of livelihood, as their annual reports show, and tending greatly to cripple their usefulness. Their aggregate expenses, during the last year, amounted to upwards of $30,000, a large sum to raise annually from the benevolent. Now, may not our dispensaries be made self-supporting in a considerable degree, without impairing their usefulness? Every patient who visits a dispensary for treatment, is able to pay a small sum of money, say five cents a visit; if, on an average, (and we believe this is the case,) each patient visits a dispensary four times, it would make an average of twenty cents for each patient treated at the dispensary. If each patient visited at home paid ten cents per visit, and we allow five visits, on an average, to each, the average for each patient, would be fifty cents. The aggregate thus received, by all the dispensaries, would be about $26,000, per annum, which would nearly cover their annual expenses in the gross, while to individual dispensaries, it would afford a small annual surplus. We do not profess to be strictly correct in our estimate, but design it for illustration. When we reflect that, of the 102,984 patients treated by these institutions, 70,491 are foreigners, is it asking too much that they be made to contribute towards the support of these great public charities, which afford them so much gratuitous aid? Besides, the patient who pays, however little, for his medical treatment, places a higher value upon it, and is more benefited than the gratuitously treated. We throw out these hints, suggested by examining these reports, and would recommend them to the serious consideration of the Medical Officers of these institutions.

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* These estimates are based upon the latest financial statements to which we have had access. The Demilt and the North-western, which are comparatively recent institutions, have incurred at the outset necessarily heavy expenditures for many things that will not require immediate renewal, and future years will, no doubt, show relatively diminished *per capita* expenses.

Emigrants' Hospital—Ward's Island.—The internal arrangement of this Hospital has recently undergone very important modifications. The old system, of Warden, Visiting Physicians, and Surgeons, and House-staff, has been abolished, and a resident physician with several assistants substituted. The following gentlemen were appointed by the Commissioners of Emigration to these several places: Physician-in-chief, Dr. JOHN B. FAY; Surgeon-in-chief, Dr. JOHN M. CARNOCHAN; Assistant Physicians, Drs. FORD and SIMROCK; Assistant Surgeons, Drs. DARLING and NELKIN.

Appointments.—We are pleased to learn that GEORGE C. BLACKMAN, M.D., of this city, has been appointed to the vacant Professorship of Surgery in the Ohio Medical College. Dr. Blackman justly ranks as one of the most learned in this department of practice. Driven by ill health to spend several years in foreign travel, he has not hitherto had an opportunity to acquire that reputation as a practitioner which we are sure awaits him. Dr. B. has been an able and acceptable contributor both to the original and review department of this Journal, and we wish him all success in the ample field upon which he enters with rugged health, and superior qualifications.

Surgical Appliances.—We refer readers to our advertising sheet for a variety of surgical instruments.

OBITUARY.

DEATH OF DR. J. C. BLISS.—Died at his residence, in this city, on the 12th of August, James C. Bliss, M.D., in the 65th year of his age.

Dr. Bliss was born in Bennington, Vt., on the 3d of January, 1791. He commenced the study of medicine with Dr. Taylor, of Lansingburgh, and afterward continued it with Dr. Ely Burritt, of Troy. In 1812 he entered the office of Samuel Borrowe, M.D., of this city, who was at the time one of the surgeons to the New York Hospital. Afterward he became resident house-surgeon to the Hospital, and in the Spring of 1815 graduated at the College of Physicians and Surgeons, having presented an inaugural dissertation "*On Permanent Stricture of the Urethra.*" The practical turn of his mind, which this essay evinces, characterized his professional career during the forty years in which he practiced his profession; and it was this, coupled with great integrity of character, which raised him to an exalted eminence in the profession. Our readers will also remember the practical character of the papers which he contributed to the pages of the Journal. During his public career, he held important offices of trust in the gift of numerous medical, scientific, humane, and charitable societies and institutions of our city, in all of which he has won the affectionate regard of all who had the good fortune to know him. We need hardly add, that one of the important landmarks of our profession has been removed.

NOVEMBER, 1855.

MEDICAL JOURNAL ADVERTISER.

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College of Physicians and Surgeons,

NEW YORK.

FORTY-NINTH SESSION, 1855—56.

The Lectures will commence on Tuesday, October 16th, and continue until March 15th, 1856.

FACULTY.

Alex. H. Stevens, M.D., LL.D., President, and Emeritus Professor of Surgery.
Joseph M. Smith, M.D., Professor of Materia Medica and Clinical Medicine.
John Le Conte, M.D., Lecturer on Chemistry.
Robt. Watts, M.D., Professor of Anatomy.
Willard Parker, M.D., Professor of Surgery.
Chandler R. Gilman, M.D., Professor of Obstetrics.
Alonzo Clark, M.D., Professor of Pathology and Practical Medicine.
Elisha Bartlett, M.D., Emeritus Professor of Materia Medica.
John C. Dalton, Jr., M.D., Professor of Physiology and Microscopic Anatomy.
Lewis A. Sayre, M.D., Prosector of Surgery.
Geo. T. Elliot, M.D., Assistant to the Professor of Obstetrics.
John A. Lidell, M.D., Demonstrator.

Fees.—For a full course $105. Matriculation fee $5. Graduation fee $25.

Preliminary Course.—This course will commence on Sept. 25th, and continue until Oct. 16th. Lectures free to the matriculated students of the College.

New Building.—The Trustees have purchased a lot in the vicinity of Bellevue Hospital, on which they are now erecting a College edifice, 65 ft. by 100, which will, they hope, equal if not surpass any building in the country. It will contain lecture-rooms of the largest size and most approved construction, a well lighted and thoroughly ventilated dissecting-room 20 by 75 ft., with every other requisite for comfort and convenience. The building will be inaugurated with appropriate ceremonies on Nov. 5th, 1855.

Clinical instruction will be given at the N. Y. Hospital by Prof. Smith, and at Bellevue Hospital by Prof. Clark.

Robt. Watts, M.D.
Dean of the Faculty.

College of Physicians and Surgeons,
67 Crosby-st., N. Y.

TO THE MEDICAL PROFESSION.

The attention of the medical profession is respectfully invited to the various appliances, kept and made to order by the undersigned, for the relief of all physical weaknesses and deformities requiring mechanical support.

The "radical case truss," invented by Mr. S. H. Marsh, and which received the only prize medal awarded for Trusses at the Crystal Palace, in 1854, is constructed upon a new principle and in such a manner as that adhesive inflammation in the openings through which the viscera escape, invariably follows its application, and its success thus far, in cases of hernia, is such that its superiority over all other trusses is believed to be fully demonstrated.

We also keep trusses of every other description, together with surgical bandages and splints—apparatus for curvation of the spine—bow-legs—club-feet, etc. Also elastic stockings, knee-caps, anklets, and abdominal belts, all made of silk and vulcanized rubber, beautifully adapted to the purpose, and universally admired. For the treatment of Varicocele, we have lately introduced a new instrument, which is highly approved, and which it is believed will supersede all former methods of treatment. The increased demand for the above articles has rendered necessary the addition of separate apartments for the application, and we have associated with us an experienced physician (Dr. J. W. Riggs), who will attend regularly at our private hospital, and, when necessary, for the proper adjustment of instruments, will also visit patients at their residence.

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A branch-store for the sale and application of the foregoing instruments has recently been opened at No. 5. West 4th-st. Cincinnati, O., by
Marsh, Corliss & Co.
and the same articles are also kept and applied at No. 25, South 7th-st. Philadelphia, Pa., by C. Marsh & Co.

MEDICAL INSTITUTION OF YALE COLLEGE.

The Course of Lectures, for 1854–5, will commence on Thursday, September 14th, and continue four months.

Benjamin Silliman, M.D., LL.D., Prof. Emeritus of Chemistry and Pharmacy.
Eli Ives, M.D., Prof. Emeritus of Materia Medica and Therapeutics.
Jonathan Knight, M.D., Prof. of the Principles and Practice of Surgery.
Timothy P. Beers, M.D., Prof. of Obstetrics.
Charles Hooker, M.D., Prof. of Anatomy and Physiology.
Henry Bronson, M.D., Prof. of Materia Medica and Therapeutics.
Worthington Hooker, M.D., Prof. of the Theory and Practice of Physic.
Benjamin Silliman, Jr., M.D., Prof. of Chemistry and Pharmacy.
Lecture fees, $68.50. Matriculation, $5. Graduation, $15.

CHARLES HOOKER, *Dean of the Faculty.*

New Haven, May, 1855.

PHILADELPHIA
COLLEGE OF MEDICINE.

THE WINTER Session will begin on Monday, October 8th.
The SPRING Session will open in March, and continue to July.
Degrees will be conferred in March and July.

FACULTY.

GEORGE HEWSTON, M.D., Professor of Anatomy.
B. HOWARD RAND, M.D., Professor of Chemistry,
HENRY HARTSHORNE, M.D., Professor of Institutes of Medicine.
JAMES L. TYSON, M.D., Professor of Materia Medica.
ISAAC A. PENNYPACKER, M.D., Professor of Practice of Medicine.
JAMES BRYAN, M.D., Professor of Surgery.
LEWIS D. HARLOW, M.D., Professor of Midwifery, etc.
JOSEPH PARRISH, M.D., Emeritus Professor of Midwifery, etc.

FEES.—One full course $84. Perpetual Ticket $150. Matriculation $5. Graduation $30.

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For announcement, or other information, address

B. HOWARD RAND, M.D.,
Dean, at the College, 5th-st. below Walnut.

GENEVA MEDICAL COLLEGE.

THE next course of Lectures, under the new organization, will commence on Wednesday, October 3d, 1855, and continue sixteen weeks.

FACULTY.

WILLIAM SWEETSER, M.D., Professor of Institutes and Practice of Medicine.
JOHN TOWLER, M.D., Professor of Chemistry and Pharmacy.
FREDERICK HYDE, M.D., Professor of Principles and Practice of Surgery.
GEORGE BURR, M.D., Professor of Obstetrics, Diseases of Women and Children, and Medical Jurisprudence.
CALEB GREEN, M.D., Professor of Materia Medica and General Pathology.
JAMES H. JEROME, M.D., Professor of Anatomy and Physiology.

The fees for all the lectures are $62. Matriculation Fee $3.

Board can be obtained from $1.50 to $3 per week.

Degrees are conferred at the close of the course, and in July. Further information may be obtained by applying for circular, etc., to

J. TOWLER,
GENEVA, N. Y. Dean of the Faculty.

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UNIVERSITY OF BUFFALO.

MEDICAL DEPARTMENT.

The Annual Course of Lectures in this Institution commences on the *first* Wednesday in November, and continues sixteen weeks. The dissecting rooms will be opened on the 16th of October.

FACULTY.

CHARLES B. COVENTRY, M.D., Emeritus Professor of Physiology and Medical Jurisprudence.
CHARLES A. LEE, M.D., Professor of Pathology and Materia Medica.
JAMES P. WHITE, M.D., Professor of Obstetrics and Diseases of Women and Children.
FRANK H. HAMILTON, M.D., Professor of Principles and Practice of Surgery.
GEORGE HADLEY, M.D., Professor of Chemistry and Pharmacy.
THOMAS F. ROCHESTER, M.D., Professor of Principles and Practice of Medicine.
SANDFORD B. HUNT, M.D., Professor of Anatomy.
JOHN BOARDMAN, M.D., Demonstrator of Anatomy.

FEES.—Including Matriculation and Hospital Tickets, $75. Demonstrator's Ticket, $5. Graduation Fee, $20.

For further information address

THOMAS F. ROCHESTER, *Dean of the Faculty.*

BUFFALO, 1855.

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THE NEW-YORK

JOURNAL OF MEDICINE

FOR NOVEMBER, 1855.

PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. I.—*Cases in Midwifery, with Remarks.* By Thomas F. Cock, M.D., Physician to the New York Hospital.

The following cases are published, not from any novelty or peculiar interest that they possess,—for such are occurring every day in a crowded city—but from a conviction that it is the duty of every one to present the experience he has been enabled to gather, in order that some industrious compiler of statistics may use his little store of materials to benefit the profession. In a department like midwifery, where statistics are so readily obtainable, and where precedents are of so much value in directing practice, there is less excuse for neglecting to record cases, than in other departments, where a doubt in diagnosis, or perplexity in choosing the proper means of relief, would deter from committing results to writing.

Fifteen years of professional experience have enabled me to collect the accompanying cases.

Face Presentations.—Face presentations were met with eight times. In four cases, complications existed which invalidated the life of the child; viz.: twice the fœtus was anencephalous, once rupture of the uterus existed, and once the funis presented with the face, and as much delay had occurred through previous manipulation, perforation was employed as the best mode of relieving the mother. Regarding these as necessarily fatal to the child, the *results* were: to the mother, favorable in all except the case of ruptured uterus; to the child, favorable in four cases; necessarily dead, four. *Mode of delivery.*—Unassisted, six cases; by perforation, two cases. *Length of labor.*—The longest was fourteen hours; the shortest four hours. *Presentation.*—Noted in four cases, three of which were left mento-iliac, one right mento-iliac.

PRESENTATIONS OF INFERIOR EXTREMITIES.—Under this head are included presentations of breech, knees, and feet, as no difference in the plan of treating such varieties was deemed necessary.

The total of cases noted is twenty-seven. Of these, there occurred, as single births, twenty; while seven were in connection with twins.

Results.—No fatal result to mother occurred. Of the children, twelve are recorded as still-born, of which two were putrid and two others premature. Deducting these, eight births out of twenty-seven were still. Of the still-born, three are noted as multiparous, four as primiparous. *Sex.*—Eleven girls to twelve boys are noted; in the other cases not noticed. *Recurrence.*—In one case, all the births (four) were by the breech; in another, all (five) were breech; in one there were two breech deliveries out of eight labors. The only case worthy of special record is as follows:

Case 3.—Patient primipara, aged 32 years. The fœtus presented by the breech, its abdomen being toward the abdomen of the mother. The body of the child was rotated so as to bring the face toward the sacrum after the delivery of the arms, but all manual efforts for the delivery of the head failed, though assisted by ergot. It was then suspected that the head might be hydrocephalic, and accordingly a puncture was made through the orbit with a trocar, which was the only instrument at command. Delivery was then readily effected. This was an unusual complication of difficulties, the position was the worst of the breech presentation, and the diagnosis of hydrocephalus was but problematical, as no fluctuating point could be reached. It was noticed that immediately on ceasing tractive efforts the head receded, but the true state of the case was only suspected until confirmed by the effect of puncturing the cranium. The long continued efforts (thirty-two hours) resulted in vesico-vaginal fistula. This patient was under my observation as an hospital nurse for fifteen years, and managed to perform her duties without exciting suspicion of her condition.

PRESENTATIONS OF THE SUPERIOR EXTREMITIES AND CASES OF VERSION. *Case* 1.—Seen in consultation. Right hand of a premature fœtus presented. Delivery effected readily by version.

Case 2.—A multipara pregnant with her third child. Before the membranes ruptured, a presenting part was detected through the partially dilated os, which was supposed to be the elbow, but when the waters escaped, this was found to be the right foot. In the expectation that labor would progress without serious difficulty, time was allowed for further development; but it was ascertained that instead of the foot descending, a hand was substituted. Action being non-avoidable, the hand was passed into the uterus, a foot seized, and by it version was effected. The child, a male, was resuscitated with difficulty. Phlegmasia dolens supervened during the second week after delivery, but the patient eventually recovered.

Case 3.—Multipara, aged 25. The physician in attendance came for me four hours after the rupture of the membranes. The right hand was found presenting. Version was readily effected; but there was no pulsation in the cord, and the child, a male, was still-born.

Case 4.—Multipara with fourth conception. Ten days before labor commenced she had hemorrhage, but it did not recur at the time of labor. The patient was seen twelve hours after the commencement of pains, and the right arm was found protruding from the vulva much swollen. As the pregnancy had not advanced to full term, the possibility of spontaneous evolution suggested itself; but it was deemed more advisable to turn. Considerable difficulty was experienced in effecting version; the small size of the limb prevented a firm grasp, and powerful uterine contractions produced much annoyance in manipulating. Success was finally obtained by passing the hand over the breech in utero and steady traction.

Case 5.—*Version.*—Referred to as tenth case of twins. The first child having been delivered by forceps, in consequence of convulsions, the second was turned.

Case 6.—A multipara in her third labor. The child presented with both hands. In ineffectual efforts to turn, her attendant had exhausted his strength, and solicited assistance. The right foot was found in the vagina with a fillet upon it, the left foot higher up, both hands posteriorly much swollen, and finally a loop of the cord not pulsating. By the aid of chloroform, version was effected with considerable exertion, and the body delivered as far as the shoulders; with these much difficulty was experienced, as the arms were greatly swollen. This done, the body of the fœtus was turned strongly over the mother's abdomen, and the head easily delivered. Child dead.

Case 7.—A multipara, aged 29, with her tenth conception, and in the seventh month. The child presented by the right elbow. Version was effected without difficulty, and a living female child delivered.

Case 8.—Referred to as Case 13 of twins. The second child presented with cord, hand and foot. Version was attempted without chloroform, but though the foot was brought externally, the uterus prevented turning, until relaxed by chloroform. The child, a male, was still-born.

Case 9.—A primipara. About nine hours after the commencement of labor, she was found with a hand and head presentation. Delay was advised, in hopes of natural delivery; but, after five hours, no progress being made, the application of forceps was commenced. Immediately on passing in the hand the head receded, and the fœtal hand descended. No alternative was left but version, which was effected without much difficulty. The child, a girl, gasped but once.

Case 10.—A multipara, aged 23, with her second conception. The child presented by the right elbow. Version was easily accomplished; but the child, a male, was stillborn.

Case 11.—A multipara in her fourth labor. She had been under the care of a student, who, on ascertaining the presentation to be of the superior extremity, sent for assistance. The previous labor had been tedious. The right arm was found protruding from the vulva, and the uterine contractions energetic. Chloroform was administered with happy effect, in relieving the contractions, and version commenced. The right hand was first tried, and came immediately in contact with a very salient sacral promontory; the cord did not pulsate. The child lay with the abdomen to the mother's abdomen, the right arm being extruded. With my right hand the foot could not be reached, but on substituting the left, version was easily produced. No delay was experienced until the head engaged, when owing to the diminution of the antero-posterior diameter, by the projecting promontory, the head became arrested and required much exertion to free it. The child, a boy, was dead before the operation.

Case 12.—A multipara, æt. 27 years, in her third labor. The presentation was funis with the right hand. Version was effected readily under the influence of chloroform, and a male child born in an asphyxiated condition. It was resuscitated.

Case 13.—A multipara, aged 40 years, with her fifth conception. Case referred to as fifth of rupture of uterus. The patient was in an apparently desperate condition, but version seemed the most feasible means for a favorable issue. No trouble was experienced in finding the feet or in delivering. The foot was lifted over the distinct edge of a rent in the right side of the uterus. The child, a male, was dead before beginning. The mother recovered.

Remarks.—Thirteen cases are given in which version was required for delivery, of which the results were to the mother favorable in all, to the child favorable in only three instances. Of these one was premature, and five were certainly dead before the operation was commenced. The sex of the children is given in nine cases, of which seven were male and two female.

In performing version, no effort has been made to grasp both feet, but a selection of the foot opposite to the presenting hand has been attempted, and this experience proves to be the most satisfactory mode of manipulating. In cases where one foot has been brought externally, and delay has occurred in producing turning, it has been thought that benefit has ensued from passing the hand beyond the breech, while traction is made on the foot in the vagina, and thus, by the double purchase, some refractory cases have yielded.

Convulsions.—Cases of eclampsia only have been placed on record, though several more have been visited. In some, a single visit, perhaps, has been made, and the history not obtained, with the requisite minuteness to warrant any deductions from them. Of the seven cases the following particulars are recorded. *Variety of convulsion.*—In six, epileptiform; in one, hysterical. *Time of occurrence.*—During labor, in all, seven; continued afterward in four cases. *Number of labors.*—All were primiparous except one, the hysterical case. *Number of convulsions.*—In two, four; in one, eight; in one, fourteen; in one, eighteen; in one, a single hysterical paroxysm; and in one, fifteen. *Number of children.*—One was a case of twins; all the rest were single births. *State of the urine.*—Noted in five cases, in all of which albumen was found. *Premonitory symptoms.*—In three, only pain in the head was spoken of. Œdema was a prominent symptom in all except the hysterical case, and in this the feet alone were œdematous. *Mode of treatment.*—In all but one venesection was used; chloroform was employed in four cases; tartar emetic in two cases; enemata, sinapisms, and cups were used, but not noticed, in all. *Mode of delivery.*—In three cases natural efforts effected expulsion; in four, forceps were used; and for the second twin, version was employed, the only case. *Results.*—Favorable to mother in five cases, two deaths. Of children four were saved, and four were still-born, both twins being dead.

Of these cases the most worthy of record was the twin-birth. When seen, the woman appeared past all hope of recovery. She had had fifteen convulsions, was perfectly insensible, the pulse being feeble and very rapid. Delivery was attempted rather from a consciousness of duty than with any hope of beneficial effect, and was produced, the first child by forceps, the second by version. It was presumed on leaving the patient that she would soon die; but on meeting her attendant, some little time after, he informed me that she had recovered,—an exemplification of a cardinal rule in midwifery, not to suffer a woman to die undelivered.

HEMORRHAGE.—No record has been kept of hemorrhage, in connection with abortion. Twenty-eight cases of different varieties of flooding have been met with, in some instances slight, in others serious, and in one only (Case 3rd of placenta prævià) has there been a fatal issue. The instances enumerated as slight have been mostly where bleeding occurred with retained placenta, and, with these exceptions, no case has been deemed worthy of record as one of flooding, unless some obvious general effect upon the patient was produced.

Causes.—Six cases of unavoidable hemorrhage are given under the head of placenta prævià. Six are recorded with retained placenta. Two with "uterine hydatids." Two of placental apoplexy. Of the remainder, inertia of the uterus was the cause in four cases; detached placenta in one, and in five no reason is specified.

Time of occurrence.—Before labor in fourteen cases. During labor in ten. Before the delivery of the placenta in fourteen; (the cases of placenta prævià are reckoned under all these heads.) After the delivery of placenta in six. Secondary hemorrhage is noticed in one instance.

The number of cases of flooding is apparently large, yet special efforts to prevent this accident have always been made. A uniform practice was early commenced, and has been constantly adhered to, of placing one hand over the fundus uteri as soon as the head was delivered, and maintaining steady pressure as the child was expelled, which was only *personally* remitted during the necessary attention to the child, until the placenta was delivered. An attendant's services have—while engaged in tying the cord, and then only—been substituted for my own compression. During the last two or three years, as a means of preventing flooding after delivery, a small book wrapped in a napkin has been placed over the uterus and the binder *tightly* applied.

With all these precautions there have been some instances where more blood was lost than was desirable. In such cases reliance has been placed on ergot, which has proved so far, a satisfactory anti-hemorrhagic. This drug has also been given when flooding was anticipated from its occurrence in former labors. In the special cases as those of unavoidable hemorrhage, etc., the treatment is given under the appropriate heads.

As a means of preventing a return of flooding, manual compression has been most relied on even in preference to, though not to the exclusion of, the use of cold in its various forms. In the severest case of flooding from inertia, pressure was maintained by my own hands for five hours consecutively, a service correctly appreciated only by those who have been similarly employed. Nevertheless, it seemed at the time the only measure that prolonged life. As a *temporizing* measure in flooding before labor or before delivery, the alum plug has been relied on with much confidence, and in no ordinary case has it disappointed; but its use is attended with one serious inconvenience in cases where operative measures become necessary. So great a corrugation of the vagina is produced, and such dry and obscuring coagula are formed, that no slight embarrassment in manipulating occurs. With this objection, however, it is a remedy of value, and in hemorrhages connected with abortion it has been found peculiarly useful.

The following cases are, perhaps, worthy of special record :—

Case 1.—While visiting Bellevue Hospital wards, my attention was called to a woman who had just been delivered of a male child, after a natural labor followed by spontaneous expulsion of the placenta. Notwithstanding that the uterus appeared to be well contracted, blood continued to flow. On examining, there was found projecting from the vulva a tumor of fleshy consistence, and about two inches broad, which on being traced up, was found to be attached to the anterior lip of the os uteri, so that its length was about four inches. From the bed at least a quart of clotted blood was removed. Pressure aided by ergot failing to control this bleeding, a hand was passed into the uterus and a clot removed. The stimulus of the hand together with strong external pressure, seemed to be efficient in checking the flooding. Subsequently ergot was given more rapidly, and there was no further flow. About four weeks after confinement an examination was made with the speculum, and on the anterior lip was a projection about one inch long, half an inch wide, and about one quarter of an inch raised above the surface. The os uteri presented an excoriated surface from which a bloody purulent fluid was oozing.

Case 2.—The following case was published in the *N. Y. Med. Times* for August, 1854, from which an abbreviation is now made. A multipara, aged 40 years, about 6½ months advanced in pregnancy, had been exerting herself during the morning, and while conversing in the afternoon she became pale and faint. She was assisted to bed, and soon became nauseated, and complained of distressing distention of the abdomen. Previous to this occurrence her abdomen had been quite small for the supposed time of pregnancy; now, however, the increase in size not only attracted her own attention but became manifest to bystanders. Both bowels and bladder had been evacuated during the day. When seen about three hours after this attack the patient was pale and faint, with a cool surface, feeble, compressible, rather slow pulse, disposed to gape and to vomit. The principal complaint was of the sense of distention, which she spoke of as a "feeling like bursting." On examining the abdomen the uterus was found distended to the size of full term of pregnancy, the portion of the organ in the right hypochondrium appeared to be more elevated than the rest, and there was an obscure sense of fluctuation in this region. Percussion detected flatus in the epigastric region, while, by the ear, neither fœtal pulsation nor placental murmur could be discovered. Vaginal examination discovered no hemorrhage, and the cervix uteri was undeveloped. During the next afternoon labor commenced, and a small quantity of dark fluid-blood was discharged. About nine hours after this, the os being well dilated, the membranes were ruptured manually, a large quantity of liquor amnii escaped, and the next contraction expelled the fœtus with the placenta, and a large quantity of clotted blood, in amount, as was subsequently ascertained, at least two quarts. The placenta was unbroken on its fœtal surface, but the maternal aspect bore evidences of detachment over fully three-quarters of its extent. The patient recoverd.

Another instance of this form of hemorrhage presented itself some years since. In this case the labor was progressing satisfactorily, when the patient became faint, sick at the stomach, restless, and exclaimed that she was going to die. No blood escaped from the vagina. After a momentary lull of contraction, pains came on vigorously, the liquor amnii was discharged, uncolored, but with the placenta several large clots of blood were expelled. This woman also recovered.

Case 3.—Secondary Hemorrhage.—A primipara was delivered on the 12th of May. She had a slow getting up, and while engaged in washing, June 1st, had some bloody discharge. On the 4th of June, twenty-three days after delivery, while at church, and standing at the baptism of her child, flooding came on. She continued to stand until she became faint, and was carried home. By the application of ice and a bandage the flooding was checked. Two days after, on visiting her, she was found on the floor, pale and faint, and with some recurrence of bleeding; she was very imprudent in exertion, but recovered after a tedious convalescence.

In one other case hemorrhage, to a considerable extent, occurred on the 10th day.

Placenta Prævia. *Case* 1.—Multipara pregnant with her eleventh child. Five days before delivery noticed a slight discharge of blood accompanied by slight pain. By vaginal examination the os uteri was thick and patulous, but no presentation could be distinguished. The next day but one after, she lost a large quantity of bright blood by gushes, accompanied by pain, for restraining which pills of lead and opium sufficed. On the succeeding day small losses of blood continued. In the evening a small portion of the placenta could be detected over the os, but as the labor advanced the hemorrhage gradually ceased, and no interference was deemed necessary, for the membranes ruptured spontaneously, and with the next contraction the head was expelled. The child, a boy, was apparently lifeless when born, but was resuscitated. Convalescence was protracted and precarious. The patient suffered from fecal accumulation, complicating the effects of loss of blood so as closely to resemble puerperal fever.

Case 2.—A Multipara with her fourth conception, was delivered after a labor of fifteen hours. The first evidence of labor was hemorrhage, and on examination, her attendant discovered a small portion of placenta over the os uteri. At the time of my visit, the patient was considerably blanched and restless, the pulse being feeble. The os was nearly dilated, and each pain caused an increased flow. The indication seemed to be to effect delivery by the contractions of the uterus itself, instead of by forceps, and for this purpose ergot was given with good effect. Its influence was kept up until delivery was completed, by the expulsion of the placenta with a large gush of fluid blood. The child was still-born.

Case 3.—Referred to as Case 14 of forceps. Hemorrhage came on at the seventh month of gestation, and continued with some intervals until delivery, there being no pain, and the os undilated. Only temporizing measures were used. At the time of my visit, the patient was perfectly pallid, but the uterine efforts were regular, and producing some effect. Nature was making a last rally. Stimulants and ergot failed to effect expulsion, and, as a last resort, forceps were used readily, and a still-born child extracted. The placenta was delivered soon after, but the exhaustion had been too great, and death occurred in less than two hours.

Case 4.—Multipara, æt. 34. When about five months advanced she was jolted in a carriage, and on the following day a colored mucous discharge occurred, which continued more or less for some time. About six weeks after this, while quiet in bed, a gush of blood occurred, about four ounces in amount, and without pain. The os was patulous and no presentation appreciable. The flooding recurred on the following night while dropping asleep. An alum plug suppressed the hemorrhage for four days. On this day hemorrhage returned and labor commenced, and during the day the bleeding was considerable and accompanying the pains. Alum again moderated the flow, and acet. plumb. was given with untoward effect, for nausea and faintness followed its use. By examination the placenta was centrically implanted. The alum had produced constriction and coagula impeding attempts at version. The placenta was now detached manually and the hemorrhage ceased. Very soon after the detachment, the faintness which had required stimulants was relieved. The pains ceasing, ergot was used for their renewal, and, after an interval of about an hour, contractions became ergotic and delivery was effected.

Case 5.—A multipara, æt 22, with her second conception.

While quiet in bed, about three A.M., the patient was seized with flooding, and on my arrival she was in a pool of blood. The os uteri was of the size of half a dollar, and on the right side soft, pulpy, and loose. The woman was not conscious of the commencement of labor, but the examination seemed to develop contraction, and that quite actively. At each pain hemorrhage occurred with a gush and labor, advanced rapidly. The membranes were ruptured, and the flooding ceased. A few pains sufficed to deliver the child, but it was perfectly lifeless.

Case 6.—Multipara with her second child. Four days before my visit, flooding occurred without pain, the woman being at full term of gestation. The tampon was used satisfactorily until to-day. On the recurrence of the bleeding, the placenta was found partially over the os, the head being beyond. Ergot was advised. On my arrival, labor was found to be actively progressing, and the hemorrhage had ceased. No interference was deemed necessary, and delivery of a dead male child was soon accomplished, the detached placenta following very soon. The patient was much blanched from loss of blood, but recovered slowly.

Remarks.—Six cases are given, one of which proved fatal to the mother, while of the children only one was saved. Two cases occurred at the seventh month of pregnancy. The amount of placenta detectable was partial in all except one case, (No. 4,) where it was centrical. The mode of delivery was by uterine efforts, aided more or less by ergot, in four of the cases; by forceps in one case (fatal); and by detaching the placenta in one case. Rupturing the membranes was of service in three cases. Case fourth is the only one in which the practice so ably advocated by Prof. Simpson, has been seen, and in this the effect of detaching the placenta completely was so satisfactory as to warrant a repetition of the practice under similar circumstances. Almost immediately after detachment, the system seemed to rally as if nature appreciated the relief from a fatal drain, and from that moment the patient's condition, before alarming, improved.

Retained Placenta. *Case* 1.—Multipara delivered of her ninth conception without professional assistance. About eighty hours after delivery my attendance was requested to deliver the placenta, which was found to be *in utero.* Ergot to the extent of two drachms was given with the effect of expelling the mass which seemed to have been recently attached over about one-third of its surface. Subsequently she was purged severely, and as was supposed, by anomalous action of the ergot.

Case 2. — *Placenta retained by adhesion.* A primipara, aged 20, delivered after an ordinary labor of seven hours duration. The uterus was well contracted, and a portion of the placenta was found in the upper portion of the vagina; this was hooked down, but the placenta was now ascertained to be adherent. Hemorrhage, to considerable extent, occurred, and the placenta was detached and removed in portions. A binder and compress, with ergot, sufficed to restrain the flooding. On the fourth day a portion of placenta came away, which proved to be final, and the patient recovered, though slowly, having been considerably exhausted by loss of blood.

Case 3. — The same patient, in labor with her second child. From its previous occurrence, adhesion was anticipated in this case, and, to avoid it, firm pressure was kept over the uterus from the time of the expulsion of the head. After the child was expelled, the uterus could be felt enlarging beneath the hand, the patient became tremulous and agitated; suddenly the abdomen subsided with a gush, which was supposed to be the placenta passing. Examination, however, detected the placental mass partially detached, and in the vagina, while about half was attached within the uterus. This was detached manually, and expelled by vaginal contraction. No unpleasant consequences followed. In a subsequent labor this complication did not occur.

Case 4.—Multipara, aged 33, in labor with eighth conception. The labor was of twenty-four hours duration, and the expulsion of the shoulders was delayed. After the delivery of the child, hemorrhage came on and the placenta was found attached over one-half its extent. It was detached manually, and the flooding ceased.

Case 5.—Multipara, aged 33, in labor with her sixth conception. After a severe labor of twelve hours the placenta was found to be retained by adhesion and irregular contraction. It was delivered by detaching and then removing it.

Case 6.—Referred to as sixth case of forceps. An adhesion, of about two inches in diameter, detained the placenta, and some hemorrhage occurred. Detached manually.

Case 7.—*Hourglass Contraction.*— A primipara, aged 28. The body of the child was violently extruded. Observing some hemorrhage, the hand was introduced, and found a sort of chamber on the right side of the uterus, whence the placenta was manually detached over a small space and uterine contraction expelled both hand and placenta.

Case 8.—*Adhesion.*—A multipara, æt. 30, about six and a half months advanced, in her fifth pregnancy, was subjected to violence which induced flooding and premature labor. After the expulsion of the child the placenta remained, notwithstanding severe expulsive efforts on the woman's part. The hand being introduced, found firm adhesion over about three-fourths of the placenta which was detached, and a contraction expelled the whole.

Case 9.—*Adhesion.*—A primipara was delivered after an ordinary labor of five or six hours duration. After the expulsion of the fœtus the placenta was found in the vagina, and the insertion of the cord was plainly distinguishable. On attempting to hook down the placenta with the finger, a small, narrow strip was found very firmly adherent with the os uteri. In manipulating to detach this, the narrow isthmus gave way, leaving a small portion of the placenta still attached. It was thought more prudent to leave the separation of this portion to time and the natural efforts, than to grope about with the hand, and without a guide in a firmly contracted uterus, and thus manually to injure the organ. The patient progressed favorably up to the tenth day when she had considerable irritative fever, and a dark and fetid discharge. She recovered. In a subsequent labor adhesion did not occur.

Case 10.—*Adhesion.*—A primipara was delivered after a labor of more than ninety hours. After the expulsion of the child (which was born alive) the placenta was not cast off. As there was no hemorrhage, and the expulsive efforts were strong, no interference was attempted for half an hour. Delivery was then effected by introducing the hand and detaching the placenta over about half its surface.

Case 11.—*Adhesion.*—Case ninth of embryotomy. Placenta required manual delivery.

Case 12.—*Irregular Contraction.*—Case eleventh of embryotomy. After instrumental delivery, the placenta was detained by irregular contraction, and was found by the hand in a separate compartment of the uterus.

Case 13.—*Adhesion.* — The woman had been delivered after an easy labor, but the placenta was retained. At my visit, four and a half hours after the expulsion of the fœtus, the placenta was found partly in the vagina. On tracing it up, a strong adhesion existed to the uterus within the os, which was firmly contracted. Two fingers were used satisfactorily in detaching the adhesion, and then the whole was forcibly expelled with a gush of blood.

Case 14.—*Adhesion.*—A primapara had been delived after a tedious labor, but after waiting an hour her attendant could not deliver the placenta. The placenta was found completely adherent. Chloroform was used to quiet the patient, who was very restive, but it was not deemed expedient to produce its full effect, as a consequence, instead of facilitating, it embarrassed the operation. The effects were allowed to pass away, and then with much difficulty the placenta was detached and removed.

Case 15.—*Partial Adhesion.*—A primipara was delivered after an easy labor of six hours. A portion of the placenta descended into the vagina. On passing the hand into the uterus, the remainder of the placenta was found firmly attached near the fundus. With one hand supporting the uterus, and the other manipulating inside, detachment was easily effected.

Case 16.—*Adhesion and Irregular Contraction.*—A primipara delivered with forceps (Case 28.) for eclampsia. The placenta was found adherent firmly over about three-quarters of its superficies, and in a chamber formed by irregular contraction. It was detached with some difficulty.

Remarks.—Of the sixteen cases given, the *cause of retention* was in fourteen cases from adhesion, and two from irregular contraction. In no case was inertia the cause of delay—a result attributable, it is thought, to the practice of firmly compressing the uterus with my own hand, from the time of the expulsion of the head to the severing of the cord. By pursuing this method, and firmly compressing the uterus afterwards, the placenta is usually found in the vagina. If not so found, there is usually adhesion, which, if flooding coexists, will require prompt detachment. In eight of the sixteen cases, hemorrhage occurred; in seven it was not present to any amount. In all the cases the result was favorable. In manipulating for the detachment of the placenta, it has been found greatly preferable to use one hand externally, to support the uterus, while the other is engaged internally, than to trust to even an experienced assistant. The manœuvre, easily accomplishable in the one method, has been found difficult by the other.

Funis Presentations.—*Presentations of the cord* have occurred in five cases. *Number of labor.*—Mostly multipara, one only being a primipara. *Duration of labor* varied from four hours to two days. *Complication.*—In one case the face presented with the cord, in one the hand and cord came down together, and one was a premature birth. *Sex of children* in all was male. *Mode of delivery.*—The simple cases were left to nature, except the case of two days duration, which was perforated. Embryotomy was also performed where the face presented; the third complicated with the arm suggested version, and in this only was the child saved.

Results.—Mothers all saved. To the child, embryotomy was fatal twice; once the birth was premature; twice compression of the cord caused death; and one was saved by turning.

TWINS. *Case* 1.—A multipara, in her tenth parturition, was delivered, after three hours labor, of two girls. No delay occurred between the births; both presented by the head. Two placentæ.

Case 2.—Multipara, delivered of two girls after a labor of twenty-four hours, both presentations being vertex. The patient was completely unmanageable, and during the expulsion of the second fœtus, tossed off the coverings completely, so as to expose the fœtus in its passage. The fœtus was expelled, together with the placenta, the membrane not being ruptured. Single placental mass.

Case 3.—Multipara, about six months and three weeks advanced in pregnancy, confined with two girls, the first presenting by the vertex, the second by the breech. The children died on the day after birth.

Case 4.—Primipara, delivered of a boy after a labor of eight hours, vertex presentation. Uterine efforts now ceased, and were not renewed until forty-eight hours after the birth of the first child, when a girl was expelled also by vertex presentation. Both children were born alive.

Case 5.—Multipara, delivered of her third conception after a labor of nine hours. Two girls, both vertex presentation.

Case 6.—Primipara, delivered of two girls after a labor of forty-eight hours; both vertex; single placenta.

Case 7.—Multipara, delivered of her ninth conception after about one hour of labor. The children were both females. The presentation of the first was unknown, having been born before my arrival; the second was breech; two placentæ.

Case 8.—A primipara, anasarcous for two months, had complained of headache and occasional dimness of vision for some time; urine highly albuminous; both children presented footling, and were delivered with an interval of seventeen hours; both lifeless. The mother died on the third day, with granular degeneration of the kidney, as confirmed by the autopsy. No convulsions occurred; single placental mass.

Case 9.—A primipara, delivered of two boys after a labor of fourteen hours; both children presented by the breech, and both were in sacro-anterior positions; there was but one placental mass.

Case 10.—A primipara, delivered, by forceps and by version, of two girls, both still-born. When seen, she was quite comatose, having had fifteen convulsions; the first child was delivered by forceps, the second by turning; the woman was quite pulseless, and appeared moribund, but eventually recovered.

Case 11.—The first fœtus presented with hand, cord, and foot. Delivery was effected by version twenty-one hours after the commencement of labor. Pains then ceased, and were renewed, with partial effect, under the use of ergot; the soft parts became heated, and, as the fœtus seemed dead, perforation and speedy delivery seemed desirable; but this opinion was overruled, and after a delay of thirty-two hours more, a dead fœtus was expelled.

Case 12.—A primipara, æt. 22. The first child presented in the right-occipito-anterior position; the second by the breech. Both were females, and born alive.

Case 13.—A multipara, with her third conception, was in labor about four days. The first child presented right-occipito-anterior, and was born alive; the second presented by hand, cord, and foot, and required to be turned; both were boys, the second being still-born; there were two placentæ.

Case 14.—A multipara, in her sixth labor, was delivered two hours before my visit, of a living male child. Friction had been maintained, but labor did not progress. The membranes were ruptured, and with the second pain after, a female child was expelled, also alive. Both presentations were cephalic; the children were full-sized; the two placentæ were very heavy.

Case 15.—A primipara, aged 33 years. Her labor had been of about forty-eight hours duration when seen by me, and the head of the child, though small and quite movable, had not made perceptible progress for nearly twenty hours. There appeared to her attendant no special cause for delay, for the pains had been sufficiently energetic to effect delivery. The size and shape of the abdomen drew attention, and inquiry was made as to the possible existence of twins, as a cause of delay. After waiting to see the effect of contraction, it was decided to assist with the forceps, which was accordingly done, and a living male child delivered under a moderate influence of chloroform and ether mixed. Another child was discovered, also presenting by the head; but the uterine energies seemed to have been so much impaired as to be unable to expel the fœtus. Ergot was given, and produced some effect. About three and a half hours after the expulsion of the first child, a female living child was born without instrumental aid. There was but a single placental mass. This case is referred to as Case 29 of Forceps Deliveries.

Remarks.—Number of Labors.—Of the fifteen cases, seven occurred with multiparæ, and seven with primiparæ, one being unrecorded. *Sex.*—Noted in twelve labors; of these, two boys occurred twice, two girls seven times, a male and female in three instances. When the sexes have been opposite, the male has been the first born. *Presentations.*—Noted in fourteen cases; of these, two cephalic presentations occurred seven times, two breeches twice, one head and one breech three times, and twice with the second twin, a hand, the cord, and a foot presented. *Results.*—Living births for both twins occurred eleven times; both were still-born twice; and twice only one of the children was dead. One mother died from albuminuria. *Interval.*—In one case, forty-eight hours elapsed between the two births, once thirty-two hours, once seventeen hours, and once three hours; in the others, the second labor came on so rapidly as not to require notice. *Number of Placentæ.*—Recorded in nine cases. Of these, a single mass was delivered five times, and in four cases two placentæ were expelled.

Rupture of Uterus. *Case* 1.—Was seen after about two days labor. For thirty-six hours after the rupture of the membranes, there was little or no pain; the pains then became satisfactory, and the attendant supposed the labor would soon terminate; but the pains ceased, vomiting ensued, the skin became cool and clammy, and the pulse feeble, but the head did not recede, nor had any sudden, sharp pain, been noticed. These symptoms had occurred about seven hours before my visit. When seen, the patient was cool and clammy, pulse almost imperceptible and very rapid, vomiting frequent; over the hypogastrium a soft fluctuating tumor, which was supposed to be the bladder, but was proved not so by the catheter; per vaginam could be felt the forehead, the right orbit being at the right acetabulum. Forceps were tried, to save the child if possible; but the soft fluctuating feel created a suspicion of the nature of the case. The instrument, though locked pretty readily, slipped from the head. The perforator was then used, and a large quantity of bloody serum escaped, and the cranium collapsed and was readily removed by the crotchet. Care was exercised to produce uterine contraction, and stimulants freely used. The placenta was found in the vagina, and removed. The patient lived four hours after delivery, and about eleven hours after the supposed time of rupture. *Post mortem.*—On opening the abdomen, about half a pint of fluid blood was found. The peritoneal coat did not exhibit a rupture positively, but was supposed to be torn in the removal; for in the vicinity of the rent, the uterine tissue was softened. Upon the uterus, in spots, was a slight deposit of lymph, and some pus was found between the bladder and pubes. On opening the uterus, which was large, dark, and somewhat softened, a rent was discovered on the right side, anteriorly and near the neck; the vagina was intact.

Case 2.—A woman, æt. 20 years, who had had one abortion previously, and one severe labor, in which the child was still-born, was seized with labor-pains about forty-eight hours before my seeing her. Labor had progressed favorably until the head had descended to the cavity of the pelvis. About this time the contractions ceased, but abdominal pain was present, and also vomiting. Her attendant attempted the application of the forceps, but the head receded on the introduction of the second blade. When seen, the patient was pale, livid, and distressed, tossing and complaining when the abdomen was touched, vomiting a yellow fluid, the pulse over 150. Through the abdominal walls the form of the fœtus was abnormally distinct. A perforation existed in the perineum, and a band was found in the vagina, the results of the former labor. The finger detected the head above the pubes. Forceps and embryotomy not being applicable, the question of gastrotomy was mooted, but decided against. The patient died ten hours after the supposed time of rupture, and three hours after the consultation. *Autopsy seventeen hours after death.*—On opening the abdomen, some bloody serum was found, and the fœtus, entirely escaped from the uterus, was lying in about the first obstetric position. In the flexure of the knee a knuckle of intestine rose up intensely reddened and covered with a film of fibrin. The omentum and parietal peritoneum also showed marks of inflammation. The child being removed, the placenta could be seen extruded from the uterus, while the uterus itself was in the right iliac region, measuring six inches in length by four and a half in breadth. The os uteri was not torn, but an inch above it, and on the anterior aspect, a large transverse rupture was found. The anterior vaginal wall was also extensively lacerated. The dimensions of the pelvis were: superior strait, antero-posterior diameter four inches, transverse four and a half; inferior strait, transverse three and a quarter, antero-posterior four and a half. The pubic arch resembled that of a male pelvis. The ilio-pectinal eminence on the right side was quite sharp.

Case 3.—A multipara, æt. 35, in labor with her sixth child. Her previous labors had been easy and natural, with the exception of the first, which was tedious. For about thirteen hours the present labor progressed slowly, with weak and inefficient contractions. About this time the pains ceased; there was no sudden pain, no outcry or sensation of tearing, and the head, which had presented in the left occipito-anterior-position, did not recede. About seven hours after the cessation of the pains, she was visited and found lying on her back, with a sunken, haggard, and pale countenance, tossing to and fro, complaining of pain over the whole abdomen, right shoulder, and legs, the surface cool and moist, the pulse feeble and about 160. On examining the abdomen, portions of the fœtus could be distinctly felt on the left side, but on the right they could not be distinguished; the head had not receded. After passing the catheter, by which bloody fluid escaped, delivery with the forceps was attempted. The instrument used was of bad workmanship, and the blades yielded when delivery was nearly effected. Perforation then became necessary, and after removal of several pieces of bone, a male fœtus was delivered. The woman lived one hour and a half. No autopsy could be obtained.

Case 4.—Was seen with Dr. Metcalfe, by whom it has been published in the N. Y. *Medical Times*, *Nov.*, 1854. This patient recovered.

Case 5.—This case was reported by Dr. J. S. Monell, in the *N. Y. Medical Times*, Oct., 1854. The patient presented herself at my office about a year after in apparent good health.

The following case did not occur in my practice, but as it has never been published, it is now presented, somewhat compressed from the statement of Dr. E. W. Owen, by whom it was furnished at my request. A woman, aged thirty-seven years, in her seventh confinement, of good health, spare habit and nervo-sanguineous temperament, had suffered no more pain before labor than is usual. Labor commenced about noon; was summoned to, and saw the patient, at seven P.M. On examination, found the membranes protruding, the pains, having a true expulsive character, recurring at regular intervals, and having a good duration, the presentation perfectly natural, the parts dilatable, well lubricated and cool. At one and a half, A.M., during a strong contraction, the patient complained of acute pain in the back and abdomen, running up in the direction of the umbilicus. The contractions ceased suddenly. The patient, during the pain, remarked that she felt as if she should burst. Made an examination during the pain, there was no recession of the head, no alteration in the form of the abdominal tumor, no perceptible hemorrhage. The patient desired to sit on the chamber, and I retired. She had no sooner got upon her feet than she fainted. I was hastily summoned, and found the countenance pale and sharp, surface cold and clammy, pulse rapid, wiry, and fluttering; made an examination, found the head had not receded; vomiting shortly occurred of dark, red fluid; assistance was summoned; forceps were applied, and a still-born fœtus delivered, followed by two or three quarts of blood. The child weighed between twelve and thirteen pounds. During my absence for aid, a change in the form of the uterine tumor had taken place, the uterus having broken away and occupying the right upper abdomen, the fœtus, the lower and left, the head not receded. Death ensued in less than two hours after the rupture. P.M.—No clots, no inflammation; the uterus was excessively large and firm. The rupture was a bilateral one, two and a half inches in extent of the vagina and cervix uteri at its posterior lip where it forms the *cul de sac.* On incising the uterus from the rent up to the fundus, the walls were found more than double their usual thickness. From this we inferred that such immense muscular power exerting its force from above, together with the large size of the fœtus, was the cause of this unfortunate occurrence.

Autopsy of a Case of Ruptured Uterus.—This case was seen only after death. At the autopsy, the following history was given. The patient, about thirty years of age, had had one instrumental labor; the second natural, and the third the fatal one. Labor pains began on the morning before death, but no presentation could be distinguished; later in the afternoon the labor seemed nearer its close, but suddenly the contractions ceased, and pain in the epigastric region was complained of with dyspnœa. Forceps were used with great difficulty, and proving ineffectual to deliver, the perforator was used, and with much effort the head drawn down. A handkerchief was now tied about the neck of the fœtus, and three operators, by successive efforts, drew down and delivered the fœtus. The woman died in an hour. The fundus uteri extended to the umbilicus. Large clots were found in the abdomen, and also some fluid blood. A laceration existed on the anterior aspect at the junction of the vagina and uterus about three inches long, transverse in direction, with ragged edges and greatly ecchymosed. The antero-posterior diameter of the superior strait measured three and a half inches, the transverse five inches, the promontory was very projecting.

Case Simulating Rupture.—A multipara, æt 31 years, in her seventh labor; for some time the labor progressed slowly; suddenly, after a severer pain than she had experienced, she began to complain of pain in the epigastric region, which she compared to a "foot sticking in there," and she exclaimed that she "should burst." As she was ordinarily a quiet woman in her labors, some apprehension of rupture was felt. She felt weaker, but the pains continued. The membranes were ruptured, and in about an hour the fœtus was expelled alive. As the uterus contracted two distinct indentations or depressions were felt in the fundus. Four days after some fever developed, and the pulse ran over one hundred and twenty, but in about four days she was able to sit up.

Remarks.—Six cases of rupture are given as having been seen by myself, one furnished by Dr. E. W. Owen, and of one the autopsy only was witnessed. For the sake of convenience the result of the whole are tabulated. *Results.*—Of the eight cases, six proved fatal to the mother, and two recovered; to the child all were fatal. *Number of labors.*—All were multiparæ *Cause of rupture.*—Hydrocephalus of the fœtus in one case, contracted pelvis in two cases, and in one case an abnormally thick muscular uterus, with a large child, was supposed to have been the cause. In one case there was reason to presume that mal-adroit attempts to deliver had produced a laceration. *Duration of labor.*—Two days or more in two cases. *Cessation of the pains.*—Occurred in four cases, *vomiting* noticed in four cases. *Presentation*—All were head. *Mode of delivery.*—By perforation in four cases, by forceps once, by turning once. Died undelivered one. *Lived after rupture.*—Recovered two. Death in eleven hours one, in ten hours one, in twenty-one hours one, in two hours one. *Seat of rupture.*—Anteriorly near neck in three cases; posteriorly one case, on right side in one case.

Inversion of the Uterus.—The only case in which this accident occurred was seen in connection with Dr. M. D. Van Pelt, by whom a report was made in the *N. Y. Medical Times*, for February, 1853. The case was one of interest in a medico-legal point of view, and also from the peculiar mode in which the inversion, or rather eversion occurred. The uterus was not indented from the fundus, but the inferior portion seemed to have turned out, giving a sort of trumpet shape to the lower part of the organ. Restitution was readily effected, and the woman recovered. Dr. V. P. has given the particulars of the case.

Monstrosities. *Case* 1.—*Anencephalous Fœtus.*—A multipara, aged 28, pregnant with her third conception, was prematurely seized with labor pains resulting from domestic calamity. At the first examination no presenting part could be discovered, the vagina being filled with the bag of waters. Some abnormity was suspected, and the membranes allowed to rupture spontaneously. The presentation of the face could be then made out but from the deficiency of frontal bone an anencephalous fœtus was inferred. At each pain, liq. amnii continued to gush, so that the bed was saturated, and a large puddle formed on the uncarpeted floor. Great exertion on the woman's part was necessary to deliver the shoulders, which were firm and brawny The fœtus just before expulsion gave a convulsive start, but was born dead.

Case 2.—Multipara with her fourth conception. During gestation she had had much domestic annoyance. On examination the face was found presenting, and the sharp edge of the frontal bone toward the right acetabulum, and beyond this a soft mass could be felt. The previous case led me to anticipate a similar fœtus. There was no profuse gush of waters, and no abnormal development of the body. The fœtus was a male and was born alive. It cried, passed urine, and fæces, and lived fifty hours.

Hydrocephalus.—Three cases have occurred, in all of which perforation was employed as the means of relief, and the cases will be found under that head.

The risks attending this complication are illustrated by two of the cases. In the first, which was a breech presentation, vesico-vaginal fistula resulted from the pressure which would not have occurred under more enlightened advice. With another case, rupture of the uterus took place with fatal issue. In the remaining case the diagnosis was so obscure, that three intelligent accoucheurs (one a Professor of Midwifery,) did not suspect the complication, until the perforator revealed the truth by a gush of serous fluid.

Vesicular Mole. *Case* 1.—A primipara, in about the seventh month of conception, had some hemorrhage, for which my attendance was requested under the supposition of placenta prævià. An expelled mass was shown, which on examination proved to be a conglomeration of vesicles, many of them being as large as a hazel-nut. Some similar bodies protruded from the os uteri which were removed. On inquiring into the history of the case the patient said, that for five months after supposed conception, she enlarged rapidly, less so after that. No motion had been felt. The areola was well marked. Ergot was advised to complete the expulsion of the "mole," but proved of little avail. On the next day another portion was spontaneously expelled, after which she left the asylum.

Case 2.—A multipara, in her second gestation. For three months the ordinary signs of pregnancy were present, but about this time the nausea became more persistent and distressing, and severe neuralgia of the head occurred. Subsequently there was some slight hemorrhage, which lasted until visited a few days before the development of the case. After about eight hours of pretty severe pains, the os uteri became sufficiently dilated to admit two fingers, with which about a pint of "hydatids" were scooped out. Considerable hemorrhage took place during this process, and stimulants became necessary. Convalescence was slow, and on several occasions a few vesicles escaped with some hemorrhage. Neuralgic pains also, were severe, for which tonics were freely given. She recovered.

Forceps Cases. *Case* 1.—A primipara, having been for twenty-eight hours in labor, was delivered of a boy by means of forceps. The child was alive. In this case the membranes had been ruptured for thirteen hours, and the head on the perineum for about eight hours. The soft parts becoming hot and painful, with diminishing pains, delivery was deemed necessary.

Case 2.—A primipara, æt. 30. At the first examination the membranes were found to have been ruptured, and the os uteri of the size of a quarter dollar. Severe pains for nineteen hours proving ineffectual to deliver, forceps were used, and a male child born alive. For some time afterwards the patient complained of pain, and difficulty of moving the right leg.

In this case chloroform was used, and it was supposed to be the first case in which that anæsthetic was employed in midwifery in this city. The date was January, 1848.

Case 3.—A primipara, æt. 37. Membranes ruptured before examination, and the os uteri about one inch in diameter. In the course of four hours the os tincæ was dilated, and the head at the inferior strait in the right occipito-anterior position, but no progress beyond was made for eleven hours. The pubic arch was contracted. By the aid of forceps a female child was delivered almost lifeless, but was resuscitated. In delivering the placenta it was found to be in a chamber, (as it were) of the uterus, produced by irregular contraction. Chloroform relieved this stricture, and delivery was readily completed.

Case 4.—A multipara, æt. 26, was delivered of her third conception, a girl, by forceps, after a labor of twenty hours.

Case 5.—The instrument used for the delivery of the head of the first twin, as referred to Case 17, of breech, and Case 9, of twins.

Case 6.—A primipara, æt. 24 years, delivered after a severe labor of forty-eight hours duration, of a living girl. Dilatation of the os proceeded but slowly, and after its completion the pains were not effective for delivery. The contractions commenced with apparent force, but, before producing expulsive effect, violent pain through the hips and down the thighs occurred, which seemed to cut short all bearing down effort. For this it was supposed that chloroform might be serviceable, but its use was overruled. Opium seemed to control it temporarily. Venesection was also used. As a final resort forceps were employed, and delivery easily effected. An adhesion of the placenta about two inches in diameter, presented the expulsion of the placenta, and required detachment manually. This patient was attacked with puerperal fever on the third day after delivery, and lingered until the seventeenth day when she died.

Case 7.—Referred to as Case 10, of twins. Protracted convulsions rendered delivery necessary, and as the head was in the pelvic cavity forceps were applied.

Case 8.—Referred to as Case 1, of rupture of uterus. Forceps applied but slipped from the yielding of the head—the fœtus being hydrocephalic.

Case 9.—Referred to as Case 3, of rupture of the uterus. The blades of the forceps sprung during traction, which was not severe.

Case 10.—Primipara, æt. 33. The membranes ruptured twelve hours after the commencement of labor, and slow progress was made for two hours, when the caput succedaneum was almost at the vulva. No progress was now made for eight hours, and forceps were used. A living male child was born.

Case 11.—A multipara, æt. 23, in her third labor. Her attendant stated that the head had occupied the inferior strait for twelve hours without advancing. Four hours more were permitted to elapse before proceeding to delivery. This was readily effected by the short forceps; child lived.

Case 12.—A primipara, aged 20, was delivered by forceps of a male child (living), after a severe labor of thirty hours. For about thirteen hours there was no advance of the head, though the contractions were energetic.

Case 13.—A primipara, aged 27, was seized with eclampsia, on the day but one previous to visit, and at the time of delivery she had had fourteen convulsions. No fœtal pulsation could be heard; but the use of forceps was deemed preferable to perforation. A still-born male child, weighing nine pounds and three-quarters, was delivered. The woman died of puerperal fever, which was prevalent at the time.

Case 14.—Case 3 of Placenta Prævià. A primipara, aged 29, was seized with flooding, during the seventh month of gestation, which continued for a fortnight before my visit. Natural efforts, though seconded by ergot, failed to deliver. The forceps were easily applied, and delivery quickly effected; but the hemorrhage had been too long continued, and the patient survived only an hour and a half.

Case 15.—A primipara, aged 24 years. After a slow progress of labor for seven hours, the head in the right-occipito-anterior position reach the perineum; here it remained stationary until forceps were used, twenty-nine hours after the commencement. In the meanwhile, she took some sour milk, which soon purged her freely, with borborygmus and pain. The use of instruments was advised, but rejected some hours before delivery. At the time of delivery the labia were œdematous, with a yellowish vaginal discharge, and pulse 130. The child, a female, was still-born. The patient had a protracted convalescence.

Case 16.—A primipara, aged 30. Had three convulsions before delivery, which was effected by forceps, and subsequently one more. The child, a male, was still-born. Albuminuria existed.

Case 17.—A primipara, aged 33. At the time of visit she had been in labor about forty-eight hours, the membranes having ruptured about thirty hours. No progress had been made by the head for eight hours. The child, a girl, was born living, but lived only for a short time.

Case 18.—A primipara, aged about 30, strong and plethoric. About three hours after the commencement of labor, the water escaped. Her attendant had made attempts to dilate the os manually, and supposing that he had succeeded, was desirous that forceps should be used. At my first visit the os uteri was about one and a half inches in diameter, with a thick hard undilatable margin. Opium was advised, and this failing, chloroform was to to be given. In the afternoon she was again visited, her attendant stating that he had again "used manual dilatation, and with good effect;" that chloroform had been used, and the os was fully dilated. On examination the os uteri was about three inches in diameter, and rigid in the whole circumference. Venesection was advised. At the next visit, the os was fully dilated, and forceps were used, and a dead male child delivered, weighing ten and a quarter pounds.

Case 19.—Referred to as Case 11, embryotomy. Forceps were used prior to the perforator. A primipara, aged 30. Length of labor four days.

Case 20.—A primipara, aged 30. Position right-occipito-anterior. Labor tedious and with much pain posteriorly, even while the head was at the superior strait. A chill had occurred, and her attendant had deemed delivery advisable. Forceps were readily applied, and delivery effected. There was no pulsation in the cord around the neck, and the child, a boy, was still-born.

Case 21.—A primipara, aged 23 years, had been in labor for fifty hours. At the time of my visit the head was low in the pelvis, but uterine efforts did not advance it. After watching for an hour, forceps were used and a male child was born living.

Case 22.—A multipara, aged over 35 years, with her fifth conception. On two occasions previously, instruments had been used. She had been in labor thirty-eight hours, and though the pains were strong, no progress was made to delivery. Chloroform having been premised forceps were used, and, with severe exertion, a boy extracted still-born.

Case 23.—A primipara, æt. about 23. She was said to have been in labor for two days. No progress having been made for some hours, forceps were used. The delay was owing to the position, left occipito-posterior. A living male child was delivered.

Case 24.—Refer to Case 11, embryotomy. The forceps were readily applied, but traction did not cause the head to descend; and as the fœtus was dead, the perforator was preferred to the use of more violent exertion with the forceps. The patient was a primipara, æt. 27. The child a female.

Case 25.—A primipara, æt. 28 years, had been in labor four days. The child, a male, was born alive.

Case 26.—A multipara, æt. 43 years, with her eighth child. In the absence of her attendant, this patient was seen about midnight. Her labor commenced with rupture of the membranes; and about twelve hours after, her attendant gave her ergot, and left with the belief that the os uteri was fully dilated. On examination the os was about the size of a half dollar. The pains were ergotic, "crampy," continuous, and very distressing. In about four hours the os became dilated, except the anterior lip. About twelve hours after, as no progress was made, forceps were used, and after severe traction, a male child, weighing twelve pounds, was extracted alive.

Case 27.—A primipara, æt. 22 years, had been in labor about two days, and attempts made to deliver with forceps. On examination, deep and extensive lacerations of the labia were found, the result of the previous manipulations. No difficulty was experienced in locking the forceps, and delivering a still-born male child, of rather more than ordinary size and weight.

Case 28.—A primipara, æt. 25 years, strong, plethoric, and anasarcous, was taken with convulsions during the dilatation of the os uteri. For this she was bled. When seen, she had had seven more fits, and was lying in the coma of the last. On examination, the head was found in the cavity of the pelvis in the left occipito-anterior position. The urine had accumulated, and was removed by catheter; it was strongly albuminous to heat and nitric acid. The child was believed to be dead; nevertheless, forceps seemed advisable, and the event proved them to be the proper instruments. A living male child, weighing ten and a half pounds, was readily extracted. The placenta adhered, (Case 16.)

Case 29.—Referred to as Case 15 of twins. A primipara, æt. 33 years, being unable to expel the first twin, after forty-eight hours exertion, forceps were used, and a living male child delivered.

Remarks.—The most striking circumstance in connection with these cases is, the preponderance of primiparous patients. Of twenty-six cases, in which the number of births is noticed, five only were multiparæ,—twenty-one primiparæ. In the multiparæ, the reason for the use of the instruments was, in one, rupture of the uterus; in one, contracted pelvis, which had on a previous occasion necessitated their use; and in one, the imprudent use of ergot, with a very large child, had exhausted the uterine energies. In four cases, the forceps were used for convulsions, in only one of which the child was born alive; and one mother died of subsequent puerperal fever. The duration of labor varied from nineteen hours, the shortest period, to four days, the longest recorded. The time elapsing during the second stage of labor without progress, has been the criterion for the necessity of using instruments; and in reflecting on these cases, in two instances only has subsequent experience convinced me that nature would have equally well accomplished delivery. In some cases, the application has been too long postponed, and unpleasant consequences ensued. Of the two cases just referred to, one was a head detained after a breech delivery, where proper manipulation would have secured extraction. The other was a simply delayed labor, where the short forceps were used. In all, except this case, the long forceps with a double curve have been used, and proved serviceable. It is often said that the hand that uses is of more consequence than the instrument to be used, a remark generally true, though not always so. On several occasions, my own forceps have succeeded where other instruments have failed; and in one case in particular, a pair of forceps yielded so much, in the course of extraction, as to permit the head to slip through, though the blades were correctly applied.

Results.—Of twenty-four children, fourteen have been born alive, nine are recorded as still-born. Of these nine, two heads were subsequently perforated, two were born in eclampsia, one died during unavoidable hemorrhage. Three mothers have died, two of fever and one of placenta prævià. *Sex.*—Recorded in twenty cases, of which fourteen were females.

The ages of mothers have ranged from 23 to 43 years, the majority being over 30.

Embryotomy. *Case* 1.—Was performed to deliver a large fœtal head. Though occurring in a public institution, no instruments were to be had for any operation, and in this case the perforator used was an ordinary pocket-knife.

Case 2.—Referred to as Case 3 of breech labors. In the same institution, no instruments being procurable, a trocar was used, and the opening made through the orbit.

Case 3.—The perforator used for an hydrocephalic child, the forceps having failed.

Case 4.—Also an hydrocephalic child. Forceps readily applied, but slipped. Referred to as Case 1 of rupture of uterus.

Case 5.—Referred to as Case 3 of rupture of uterus. The perforator used after the failure of forceps.

Case 6.—Case 4 of rupture of uterus.

Case 7.—A primipara. Duration of labor twenty-nine hours. No fœtal pulsation could be detected, and there was a fetid odor from vaginal examination. After delivery by the craniotomy forceps, there was some hemorrhage. Recovery was tedious. Male fœtus.

Case 8.—A multipara, four days in labor with her second conception. When seen, a fetid odor was perceptible on vaginal examination, the soft parts hot and dry. This woman died of peritonitis.

Case 9.—A primipara, æt. 26, had been in labor for five days before visit. Vaginal examination gave ample evidences of decomposition. In delivering the fœtus, the bones of the head came away separately, as also the clavicle and some ribs. The remnants of the fœtus without the brain and bones weighed eight and three-fourth pounds. The patient lived only two days.

Case 10.—A primipara, æt. 18, was delivered, after a labor of two days. The cord prolapsed by the head, and was pulseless for twenty-four hours. Delivery was readily effected. The woman died.

Case 11.—A primipara, æt. 32 years, had been in labor when seen for two days, during which time ergot had been given, and attempts made to deliver with the forceps. When visited, the caput succedaneum was found distending the vulva, but delivery was impeded by the narrowness of the bis-ischiatic diameter, which was not more than three inches. At the request of the attendants, an attempt was made to apply forceps, but it proved, as was anticipated, unavailing. The perforator was then used, and even after the brain was evacuated, much difficulty was experienced in delivering the head. No less trouble was experienced in delivering the body. The cuticle peeled readily, showing the death of the fœtus before perforation. The uterus contracted irregularly, and the hand was passed to effect the detachment of the placenta.

Case 12.—This case had been under the charge of two different practitioners; the first of whom said he had found an arm presenting, which he had returned, and then resigned the case to the second, who found the cord prolapsed and the face presenting in the left mento-iliac position. He had tried forceps ineffectually. On visiting the case, about a foot of the funis was found prolapsed, the face was at the superior strait, looking to the left side, the chin being posterior. The cord being pulseless for a long time, the child was presumed to be dead, and cephalotomy the proper means of delivery. The perforator was pushed through the scalp-tumor which had formed on the right frontal bone, and after breaking up the brain, delivery was effected by craniotomy forceps and the crotchet. As the head was being delivered, the occiput rotated upon the crotchet as a pivot from right to left, into the hollow of the sacrum, and was thus delivered, the chin being under the pubes; restitution occurred toward the left thigh. The shoulders were delivered manually, and the placenta passed without assistance; child, a male.

Case 13.—A primipara, aged 30, had been in labor four days before my visit. The pulse was 122, with no abdominal soreness; the bladder was distended. Per vaginam the head was pressing upon the soft parts, the sutures sharp and bones overlapping. There was no uterine contraction, and had been none for five hours. The catheter was passed. After an unsatisfactory attempt with the forceps, the scissors were used. By the crotchet the cranium was pulled away piecemeal, and, with much difficulty, the remnant of the head and body were delivered, a great explosion of fetid gas following the expulsion. The placenta was found enclosed in a chamber; and was delivered manually.

Case 14.—A primipara, aged 27, had been in labor for three days prior to my seeing her, the membranes having ruptured within seven hours after the commencement. Per vaginam, the scalp was found turned, and the edges of the bones sharp, the presentation being right occipito-anterior. The inferior strait was contracted, the pubic arch being like that of a male pelvis. The abdomen presented two tumors, divided by a sulcus, which appearance was quite deceptive, as the catheter was stated to have been recently passed. This proved to be an error, for on the delivery of the head, urine gushed out very freely. Forceps were first tried, and though easily applied, produced no effect, and the perforator was then resorted to. Severe traction was requisite, but delivery was finally effected, and the woman recovered.

Remarks.—Of the fourteen cases, one only occurred in my own practice, viz.: the breech case, in which hydrocephalus caused the delay in expelling the head. In no case has a living child been sacrificed, a circumstance attributable to the natural repugnance every conscientious practitioner feels to destroying life, even in emergencies. As, with the one exception, all the cases were seen in consultation, much delay had occurred in seeking advice, and there has been no ground for hesitating as to the mode of delivery. Evidences of fœtal death have been, in all cases, manifest. So much has this been the case, that it has materially influenced the result to the mother; for out of the fourteen cases, no less than five women have died. Of these, one death was from rupture of the uterus, and four from fever. Of ten cases recorded, only one occurred in a multipara. The reason for operating is noticed in eight cases, three were for ruptured uterus; three children were hydrocephalic; twice the funis was prolapsed and pulseless.

UNCLASSIFIED CASES. *Case* 1.—*Presentation Occipito Pubic.*—A German woman, æt. 36 years, pregnant with her sixth child, was delivered, after a very tedious labor of twenty hours. Her previous labors had been easy and rapid. In this, though the contractions were sufficiently energetic, but little progress was made, owing to the position of the child. At the superior strait, the presentation was easily made out by the occipital and sagittal sutures. The latter occupied the antero-posterior diameter of the superior strait, and the head was with difficulty expelled in this position.

Case 2.—*Labor with Disease of Heart.—Death.*—A multipara, in her seventh pregnancy, began to complain about two months before term. Irritability of stomach, deficient secretion of bile, scanty and high-colored urine, the pulse full and bounding, were prominent manifestations. Venesection relieved the symptoms temporarily. A week later she was troubled with cough and slight hemoptysis, for which no pulmonary cause could be found. On consultation, the venesection was repeated, and antimonials used, with good effect. The cough subsided, and the urine became copious, having no albumen in it. A careful examination of the heart now discovered hypertrophy, with a systolic murmur, having its intensity over the aortic valves. The improvement lasted about a fortnight, and the patient suffered more than before. The respiration was difficult, and she could not lie down ; the sputa were streaked with blood. A different consultant was called in, who advised enemata of turpentine and a solid diet, in order to relieve flatulence. These measures did not relieve. The pulse was tense, strong, and bounding, causing the radial and ulnar arteries to start, with the violence of the pulsations ; the cough was frequent, and expectoration bloody. A small bleeding was ventured, but the force of the pulse was broken at once, and the arm tied up. On renewed consultation, it was determined to anticipate labor ; and, to induce premature contraction, compressed sponge was inserted within the cervix, and the vagina plugged. These measures seemed to coincide with labor, though the patient was not conscious of it ; for in about four hours the os uteri had dilated to two inches in diameter, and the membranes had ruptured spontaneously. No relief was obtained by the evacuation of the liquor amnii. While I was in an adjoining apartment, she arose to the close stool, and when called, I found the head had emerged while in that position. The patient was placed in bed, and soon the body of a female child was expelled living. The placenta remained partly within and partly without the os uteri, strong pressure being kept up over the fundus uteri ; but there was no flooding. After some effort on the woman's part, and the ineffectual use of ergot, the placenta was delivered manually and with less than the usual loss of blood, and the uterus contracted well. The patient could not be kept recumbent, but tossed around violently, gasping for breath, but no flooding occurred. Stimulants were actively given for more than an hour, when she started up wildly, gasped, and died.

Case 3. — *Dyspnœa after labor threatening dissolution.*— A multipara, aged 30 years, with an obscure cardiac affection (hypertrophy) was troubled with dyspnœa during the latter months of gestation, which precluded exertion even to a moderate extent. The labor was short, the pains being lengthened and efficient, but all outcry was stifled by self-control. No hemorrhage succeeded delivery, but almost immediately after the difficulty of breathing became very alarming, the face became lurid, the nails purple, the pulse weak, irregular and intermittent, and she was compelled to sit up in order to breathe. Stimulants were freely used by mouth, and to the nose, and a sinapism laid between the shoulders. Relief gradually ensued, and she recovered without return of the distress.

Case 4.—Was requested to see, in consultation with two practitioners, a primipara , aet. 30, who had been in labor for two days, the membranes having ruptured early, and the subsequent progress being slow. Her attendant was sitting by the bedside, and stated, that about three hours before, the pains had been active and delivery seemed imminent, but suddenly the pains had ceased. The head, he said, was impacted, and the catheter would not pass. The pulse was 100, the skin cool but not clammy. On examining the abdomen, the bladder was much distended. On attempting to pass into the vagina, the head was found delivered, the scalp emphysematous, and the bones loose. Her attendant was much surprised. He was requested to complete the delivery, and with some trouble, owing to the putrid state of the fœtus, did so. Immediately on the expulsion, an explosion of fetid gas occurred, and the bladder was evacuated spontaneously. The woman subsequently died.

Granting her accoucheur's account to be strictly correct as to the cessation of pain, and his *subsequent* examination finding the head still under the pelvis, what effected the delivery? Was it the development of gas by decomposition that silently extended the head?

Case 5.—*Elongated anterior lip of cervix.*—A multipara with her second child. On making the usual vaginal examination, the os was found about two-thirds dilated, and a teatlike projection attached to the anterior lip. After some time she rose from her bed to go to stool, and was found upon her hands and knees, the child being on the floor, and having lost considerable blood. The cord was divided, and as the woman continued to lose blood, she was replaced in bed before delivering the placenta. This having been done, firm pressure was made over the uterus, which caused the escape of blood and coagula. Per vaginan were found clots, and another substance which was supposed at first to be a clot firmer than the rest. On tracing it up, however, it was found to be the anterior lip of the uterus, elongated sufficiently to protrude from the vulva, about one inch wide at its apex, and gradually widening to its base. This was not interfered with. A similar case had been related to me a few days previous by Dr. Beadle.

Case 6.—*Good effects of chloroform.*—A primipara, the wife of a medical gentleman, had been in labor when seen, for several hours, the os being dilated, and the pains slow and inefficient; simple delay was advised. The next day, as no progress had been made, ergot was suggested, but no good effects were obtained from it. Her husband had also used chloroform. In the night it was thought advisable to use forceps, as the labor had continued about forty-three hours, the head occupying, for a long time, the inferior strait without advancing for several hours. As a preparatory step chloroform was used, and as soon as the full effect was obtained, the operation was commenced. On attempting the passage of the first blade the head was found descending, and of course the natural efforts were allowed to complete the delivery. The child, a boy, was born asphyxiated, but recovered. In this case two causes had acted to impede labor, first the pains were inefficient, while the second and principal cause was great sensitiveness of the external parts. Chloroform acted kindly in relieving this hyperæsthesia, and then the uterine efforts sufficed to expel the fœtus through a vulva, relaxed also probably by the anæsthetic.

NEW YORK, 64 East Twelfth-st., Sep. 25.

ART. II.—*Report of a Case of Hydrophobia, with Post-mortem Appearances.* By THOMAS TURNER, M.D., Physician to King's County Hospital, N. Y.

N. C., a tall muscular man, aged 45, a laborer, was admitted into the Hospital, Sunday, August 12th. The account given was, that his hands had been bitten while assisting to kill a dog, on the 12th of May last, and that soon after, and before the wounds had healed, he had buried a dog, killed in consequence of his having been bitten and worried by a dog that was undoubtedly rabid. The wounds had healed and he had been quite well until the Wednesday previous to admission. On the afternoon of that day he "felt chilly and trembled all over and vomited." The next day he went to his work, but did not feel well. At noon of the same day he went home and asked his wife for some coffee. He said that when he tried to swallow it, "it went down the wrong throat and strangled him so that it made him spring up to the ceiling." He had not slept any for two nights, and continued getting worse. He was attended by a homœopathic physician, who pronounced it hydrophobia. And he was also examined by Drs. Palmedo and Ayres, his symptoms being considered by them as those of hydrophobia.

At time of admission, his countenance was pale, and he appeared slightly debilitated, but his general appearance was not that of a very sick man. He had been intemperate in his habits, and he talked quite naturally and was of the opinion that his trouble was caused by drinking too much. His pulse was 100. Tongue covered with a thick yellow white fur. Bowels costive and the conjunctivæ slightly yellow. He complained the most of a constant pain at the epigastrium. Had pain in his back between the scapulær and some soreness in the course of the trachea and œsophagus. He said that he "would be quite well only for the nervousness and if he could swallow." He thought a little brandy would make him feel better at his stomach. Some brandy and water was brought. He laughed good naturedly and said he did not like to take it before the other patients. He was taken into another room and the cup handed to him. He sighed deeply a number of times, throwing his head far back each time, and appeared much distressed but made a sudden effort and gulped down the greater part of it.

On seeing him soon after with Dr. Ingraham, he was asked if he would like a drink of milk; he sighed deeply as he had done before when attempting to swallow, and it was noticed that whenever mention was made of his drinking or eating anything, he acted in the same manner.

He was ordered a dose of calomel, and to be cupped over the epigastrium. When taking the powder, he put out his tongue far to receive it, and covered his eyes with his hands, the effort to swallow it distressed him, though not so much as when taking fluids. The calomel operated on his bowels in about six hours after taking it, and he ate supper of bread broken up and soaked in milk.

At bed-time was ordered Morph. Sulph. gr. one-fourth, which he took on his tongue in the same way as the calomel. Was restless through the night and complained of being thirsty, but was afraid to drink.

Monday morning he seemed much worse. Extremities cold, and the whole body covered with a profuse cold perspiration. Pulse 90 to 100, but weak and irregular. Tongue clean and has no pain at epigastrium. His left arm was found to be partially paralyzed. He said he had lost the power of it some time in the night. He was restless and talked much and that mostly nonsense. He was constantly hawking up a tough mucus which appeared to come from the fauces. The flies lighting on his face caused him to start suddenly, and the nurse used a fan to brush them away, but he shuddered and gasped in great distress, and said that fanning took away his breath. He complained also of the light, and of the air when the door or window was opened. He drank some wine and water with more ease than he had the previous day. About 11 A.M. he had convulsions. After these he sank very rapidly and died at 12½ P.M.

Post-Mortem Examination, Twenty-Five Hours after Death.—External appearance—The body was mottled with purplish spots, especially on the extremities. On the back the lividity was general. The nostrils surrounded with frothy matter. Body not emaciated. The cicatrices of the bites on the fingers a little bluer than the surrounding skin. No complaint had been made by the patient of any uneasy sensation, nor had any abnormal appearance been observed in these scars at the time of recrudescence.

The intestines were pink from congestive vessels. The stomach contained some partially digested food, and a quantity of brownish colored fluid. An oval patch, about five inches long by four inches wide, at the greater curvature of the stomach, was denuded of mucous membrane. The blood-vessels enlarged, and over them and along their course the mucous coat was wanting. Liver large, some portions of it were yellower than the rest, but otherwise it was healthy. The heart fully. A fibrinous clot was found in the left ventricle. The mitral valves thickened, and osseous deposit in the aorta near the semilunar valves, but not involving them.

There were old pleuritic adhesions, and the lungs were congested.

The œsophagus, trachea, larynx, tongue, and as much of the pharynx and fauces as could be obtained, were taken out together. The papillæ at the base of the tongue were very much larger than natural. The fauces and epiglottis congested, numerous enlarged vessels were observed, and the follicles of their parts were large and prominent. The larynx also red and congested. Some appearance of œdema about the glottis, and the ventricle filled with a frothy mucus. Lining the œsophagus and pharynx was false membrane extending from the fauces almost to the stomach. This false membrane was thin but well defined, and was rather thicker on the anterior than the posterior surface of the tube.

On opening the head, the vessels of the dura mater were seen distended with blood. The arachnoid thickened and opaline, and subarachnoid effusion was found, and about ℥ij of fluid effused at the base of the brain. The red points seen on slicing the brain were larger and more numerous than usual, and the cerebral substance was softened in the centre of the brain, but this may have taken place after death, as the weather was warm.

On turning the body on its face, the cerebro-spinal fluid escaped freely from the foramen magnum, and it was noticed that this fluid was thick and opaque like pus.

The spinal cord was examined by sawing through the laminæ of the vertebræ on each side of the spinous processes, and on raising the piece thus detached, the investing membranes of the medulla were seen coated with lymph throughout nearly their whole extent. The lymph was deposited more abundantly on the posterior than on the anterior surface of the cord.

ART. III.—*Case of Tubercular Encephalitis, with Pulsating Tumor on the Occiput.* By JNO. S. ANDREWS, M.D., of East New York, King's Co., L. I.

IT having fallen to my lot to witness the termination and autopsy of the following remarkable case, I send the same for publication in the Journal. And in communicating it, two objects have induced me to the task. First, that through the medium of your columns, the result may come under the direct notice of several eminent practitioners in different sections of the States, who have had this patient under their observation and treatment; secondly, believing, from its peculiar and anomalous character, that it will be interesting to all of your readers, and especially those who devote much time to the investigation of disease and its phenomena.

Lamertine Bovay was born in the year 1848, of apparently healthy parents. At birth, his head was noticed to be of the most symmetrical kind; it did not present that elongated appearance common in infancy. His mind, early and during life, was very active, and he was noted for his precocity of talent and rare endowments; possessing, also, an exuberance of all the nobler faculties and gentler affections. Up to the age of ten months, he was perfectly well and not subject to the usual ills of infancy. At this period, an eruption, following vaccination, made its appearance upon his face, and spread over its whole surface, and on to the scalp. For this he was under treatment, and as it subsided, *dysentery* ensued, followed by an affection of the lungs. The last occurred simultaneous with the disappearance of the eruption. This terminated with soreness behind the ears, and glandular swellings of the neck, which, alternating, lasted three years. During the fourth summer, he had a severe attack of *dysentery*, (prevailing epidemic at the time,) which prostrated him so much, that several months elapsed ere he regained his usual strength. In February following, an intermittent neuralgia, as it was then termed, attacked him, characterized by severe pain in the occipital region of the head, stiffness in the neck, and fever which continued for three weeks. Similar attacks followed, of an intermittent or remittent nature, up to February, 1854, when he was seized with some disorder of the lungs. This subsiding, the neuralgic symptoms again appeared, and were marked by a greater severity than before, a disposition to fly from one part of the system to another, and finally locating itself in the back and left side of the head. The finale of this was, a pulsating tumor appearing in the back of the head, and a gradual loss of sight commencing in the left eye. Under a course of treatment which lasted from May till September, his health gradually improved, the tumor disappeared, but there was no noticeable change in his eyesight. He remained in tolerable health,—subject, however, to headache, upon any undue excitement,—until May 7th, 1855, when another neuralgic attack appeared, with nearly the same symptoms as before. About the fourteenth day of this seizure, there was some disposition to unconsciousness, which alarmed the parents, and I was summoned to attend him. From his mother, a very intelligent lady, I gathered the foregoing history. I found him extremely prostrated, suffering at times excruciating pains in the back and left side of his head, and a tendency to stupor in the intervals. The veins of the head were full and enlarged, the eye-lids were closed, appearing like one suffering from intolerance of light, and the eyes were completely amaurotic. A strong light, however, caused the pupils to contract, and the iris moved sluggishly; but he could not discern anything. His cutaneous system was very sensitive, so much so, that he could not bear to be touched. There was an indentation in the occipital bone, directly in the spot where the pulsating tumor appeared. Up to this attack, there had never been a convulsion or spasm; no tendinous contraction or paralysis; no mental aberration or delirium; no derangement of the abdominal organs,—symptoms which usually accompany organic disease of the brain. My diagnosis was somewhat ambiguous, regarding the cause of these rare phenomena; two theories, however, were suggested on reflection,—the first, from his having an aneurism external to the skull, led me to conjecture that there was the same change internal, either continuous or separate; the second, from the history of the patient, that there was some scrofulous disease of the encephalon or its membranes, complicated with an aneurism. With these views, Drs. Ingraham and Turner, of King's Co. Hospital, whom I called in consultation, concurred. On the fourth day of my attendance, he was seized with tetanic convulsions, which lasted several hours. Shortly after this, the aneurism appeared again, and he died five days afterwards, with all the symptoms peculiar to that mode of death by gradual coma.

I would also remark that the paroxysms of pain, and any excitement, were always characterized by a sudden determination of blood to the head.

Autopsy eighteen hours after death.—Present, Drs. Ingraham, Turner, and myself. Body much emaciated and anæmic. On detaching the scalp, a number of large veins, distended with blood, were seen about the middle of the *os occipitis.* Just below the occipital protuberance was observed the depression spoken of, about one-third of an inch in diameter and one-fourth of an inch in depth. This was the location of the aneurism. The position of this depression corresponded with the part within the skull known as the *Torcular Herophili*, where the longitudinal sinus divides into the lateral ones. Covering this hollow in the occipital bone, was a membrane which appeared to be formed by the thickened walls of a distended vein, and on cutting through it, venous blood flowed out freely. In sawing around the cranium, the line of separation was intended to have been made below the depression but the instrument passed through the centre of it. A complete foramen about the size of a large crow quill perforated the bone, and, there was no doubt a free communication between the venous sinuses of the brain and the enlarged vein externally. Removing the top of the skull, the vessels of the *dura mater* were much congested, but no disease of the membrane was discovered. This being cut through, a large quantity of serous fluid was effused beneath it. The vessels of the *pia mater* were highly congested—the *arachnoid* thickened and opaque over the base of the brain, and there was a quantity of subarachnoid effusion in the same region. Around the *chiasm* of the optic nerves, over the *tuber cinereum* and anterior surface of the medulla oblongata, lymph was deposited. The divided surfaces of the optic nerves were of a reddish color, presenting quite a contrast to the white appearance in a normal state. Slicing off the upper portion of the brain to the level of the *corpus callosum* and raising up the *commissure*, the ventricles were found distended to thrice their natural size with effused serum. On the left side, embedded in the *thalamus opticus* at its outer border, and contiguous to to the *corpus striatum*, was found a tubercle the size of a large pea. Cutting lower, another larger one was discovered, external and anterior to the first, in the medullary substance of the brain, and examining further, a mass of crude tubercles as large as a plumstone was found in front of the last in the white substance.

The cerebral substance around these tubercles was softened, showing plainly, on comparing it with that of the left side of the brain, that the softening was due to diseased action, and not to any change after death. The posterior portion of the *corpus callosum* and the *fornix* were also very much softened resembling albumen slightly curdled by heat. The *choroid plexus* appeared as large again as usual. In the right lobe of the cerebellum there was a large tubercle. It was round and about one half of an inch in diameter, and softened in the centre.

No other organs were examined, as there were no indications of disease, previous to death, in other parts remote from the head, and the lesions found after death accounted for all the symptoms.

The post-mortem examination was very satisfactory. The lesions were *a tubercular inflammation* of the substance of the brain—the *amaurosis* being an effect of this cause, or of an effusion of lymph, resulting from this inflammation, taking place at and around the origin of the optic nerves.

The probable solution of the pulsating tumor is this: a small vein penetrated the skull, communicating with the torcular herophili and the scalp, and the protracted determination of blood to the brain produced an enlargement or distention of the torcular herophili, and this vein communicating with it, participated in, and received a proportional increase in its calibre. Like the continual drop wearing a stone, so the oft-repeated *vis a tergo* expansion wore the bone; the pulsation was dependent upon the brain; hence the pulsating tumor seen during life, and the foramen found in the skull after death.

Art. IV.—*Report of a Case of Necræmia, with remarks.* By C. C. Willard, M.D., of Greene, N.Y.

On the 18th of Dec., 1854, in consultation with a neighboring practitioner, I saw a patient, a stout, hearty man in the prime of life, in the following condition:—

Pulse varying from 130 to indistinctness, respiration 80 in the minute, slight cough. Expectoration profuse, sputa highly charged with apparently effused blood, a dull heavy pain in the region of the heart, perspiration very profuse, skin clammy, mind somewhat wandering, restless, uneasy, constantly wishing to change his position, but unable to do so without assistance; the right foot presented a very singular appearance; the skin of the first toe seemed to be dead and separated from the fleshy parts, though it still preserved its continuity, with the exception of one or two small artificial openings, from which there occurred a small sanious discharge. The whole foot was of a dark, reddish, brown color, and seemed, for the most part, insensible; a bright red irregular line was seen on the inside of the leg and thigh, very painful, and sensitive to the touch.

The history of the case, from the physician in attendance, was as follows:—On the 14th, the patient called at his office to consult him in regard to his toe, which he alleged to have been frozen some three years previous, and it had troubled him more or less since that time. The toe then appeared white, an erysipelatous blush extending more or less into the foot. A puncture was followed by a very slight sanious discharge, the whole foot was extremely painful and tender. He was advised to apply a poultice.

On the 15th, he was called in haste, and on arriving at the bedside found that on the application of the poultice, the pain had left the foot and appeared in the left shoulder and side. On removing the poultice, the pain had returned to the foot, leaving the shoulder but not the side. Ordered a continuance of the poultice and an anodyne.

16th. Pain in the side increased, pulse rapid, respiration hurried, cough slight, but not painful; no expectoration, prostration great, unable to turn alone in the bed, foot painful as before, erysipelatous blush extending upon the limb. Ordered a blister on the side; emetic and cathartic diluents and nauseants to continue.

17th. No relief to symptoms, emetic and cathartic operated freely; pulse rather faster and respiration more hurried than yesterday—treatment continued. The erysipelatous appearance extending up the limb, caustic was applied to meet and check it, which apparently did so. Such was the history of the case on the eve of the 18th. He was then to all appearance in articulo mortis. From certain peculiar appearances presented by the case, we were led to make some inquiries into its earlier history, and, from his wife, learned that about ten days previous he had, from some source, obtained a prescription to cure chilblains, which was, to bathe the part affected in boiling spirits of turpentine, and he had done so, making the application three or four times a day for two or three days, but the chilblains grew worse instead of better, and he then applied to the physician with whom I saw the case.

After midnight of the 18th, he failed rapidly, notwithstanding the free use of stimulants, and died early on the morning of the 19th.

It has occurred more than once, perhaps, to every practitioner that he has been obliged to form an opinion as to the character and cause of certain cases, from their similarity both in appearance and result to others progressing from a known cause through the same course to the same result. The case just read will, I think, come within the bounds of that class. The symptoms all point in one direction, viz.: to a complete prostration of the vital powers, and this prostration so great, as to be noted particularly within the first twenty-four hours. For the cause of this we must obviously look for a check to some one or another of the parts more intimately connected with the prolongation of life.

Carpenter, in his *Physiology*, p. 451, says :—

"The final symptoms which are common to all these diseases—plague, glanders, pustula maligna, and others dependent upon the induction of some form of poison into the system, have been well described by Dr. Williams, in his principles of medicine, under the title of Necrœmia, or depravation of the blood, —'Almost simultaneously the heart loses its power, the pulse becomes very weak, frequent and unsteady, the vessels lose their tone, especially the capillaries of the more vascular organs and congestions occur to a greater or less extent, the brain becoming inactive, stupor ensues, the medulla is torpid, and the powers of respiration and excretion are imperfect; voluntary motion is almost suspended, secretions fail, molecular nutrition ceases, and structures die and begin to run into decomposition as soon, if not even before the pulse and breath cease.' "

This concatenation of symptoms is said, by this authority, to follow upon the known or supposed absorption of poisonous matter into the circulation, producing, as the name given would indicate, death of the blood.

In many cases of poisonous absorption the effect only is, and ever must be tangible, the cause speculative; in others again the cause, as well as the effect may be satisfactorily traced. At the present stage of pathological research, much in relation to this subject must remain speculative, and the ground, that like causes produce like effects, must for the present, be occupied as terra firma.

That the human system, in certain conditions, is susceptible to the action of animal poisons is admitted by all, and is amply proven in the effect of dissecting wounds, the application of the matter from a glandered horse to an abrasion of the skin, etc.

Now, how can these effects be accounted for, or even the effect of the vaccine virus, otherwise than by calling in question the powers of the absorbent system.

Physiologists tell us that the lacteals and lymphatics are absorbent glands—their proper function being nutritive absorption—that the lacteals have the power of electing and only take up proper nutritious substances, while the lymphatics are prone to absorb whatever comes in their way in the proper form, both discharging their contents into the blood-vessels. With these facts before us, it is not difficult to understand how this disease, necrœmia, or depravation of the blood is produced by the poison being deposited within the reach of the lymphatic absorbents, and carried by them directly into the blood, so that its first and immediate effect is upon the blood itself.

The case recited appears to me to bear a close resemblance to the description given by Dr. Williams of the symptoms attendant upon necrœmia. So close indeed is the resemblance that it seems almost impossible to conclude that it can be any other disease; but, we have no evidence of poison from a foreign source, as in the case remarked upon by the authorities, by them the poison being noticed as having its origin out of the system; how far this may be necessary remains to be seen.

Prof. Wood, in his *Practice of Medicine*, p. 128, says:—"Porrigonous ulcers of the head and face, and the sores so common behind the ears of children, often give rise to inflammation of the lymphatic glands of the neck and the intervening absorbents. The deep seated absorbents may become inflamed in consequence of a contusion, or fracture, or deep penetrating wound, or from their communicating with collections of acrid matter. In all cases the inflammation seems to be propagated by what is termed continuous sympathy, or by the action of acrid matter upon their inner surfaces." The same author also says: "the constitutional symptoms are not usually severe, and that death seldom occurs unless in constitutions enfeebled by intemperance, or in cases dependent upon the absorption of some poisonous agent." Making an evident distinction between poisonous and acrid agents.

In the case under consideration, the patient was a robust, temperate man in the prime of life, yet he died with all the symptoms of necrœmia or death of the blood; but no evidence appears of any inoculation of poison from a foreign source; and the seat of the apparent origin of the disease, together with the season of the year, seems to forbid even a reasonable supposition that such might, by any chance, have been the case. Therefore, we are led to look for a reasonable source of the poison within the system.

Turpentine boils at about 30° Fahr. What would be the effect of this degree of heat upon living animal tissues? Boiling water applied to the skin causes the death of that tissue. In this case we have the repeated application of a much greater amount of heat, sufficient probably to destroy the vitality of the parts almost immediately. Here, then, we should have the dead and living parts in intimate connection. The part so destroyed by the action of the heat is probably as devoid of vitality as though it were actually separated from the system, and being so considered, that part, like other dead bodies, must either contain, or have the power of generating, poisonous matter. Then, the poison being generated almost, if not quite, in contact with the living absorbents, is by them thrown into the blood, and the system, being in the proper condition, is acted on by the poison, and all the characteristics and results of death of the blood from poisonous absorption will necessarily be prevented.

As a sequence, upon this view of the subject, the question might occur whether the constitutional symptoms usually observed to follow the occurrence of mortification, are not the result of poisonous absorption rather than the severity of the inflammation.

It will be noticed that the symptoms of necrœmia, and those that we are taught to observe as indicating it, are very nearly identical. Although a post-mortem examination after death, preceded by these symptoms, does not always reveal the only direct and positive evidence of gangrene, viz.: putrefaction. Neither is the introduction of animal poison into the system always followed by the effects. Inflammation, however violent, never produces these symptoms; they never occur until gangrene supervenes. Hence the inference may readily be drawn, that these symptoms, occurring under different circumstances, so nearly similar, and apparently following the action of a certain cause, may be ascribed to one and the same cause: namely, the action of the poison generated by a dead body, whether or not in connection with living parts upon the blood, whenever that poison shall be placed within the reach of the absorbents, and by them deposited in the blood-vessels.

ART. V—*An Inquiry into the Nature of the anomalous Affection known in the United States by the appellation of "The Nursing Sore Mouth," or "Puerperal Anæmia."* [*] By M. L. KNAPP, M.D., late Professor of Materia Medica, &c.

II.—*Medical Topography of the State of Illinois, the field of the writer's observations.*

THE topography of a country throws much light on the character of its diseases; we, therefore, bring to our aid, in this inquiry, the knowledge acquired from observation of the medical topography of Illinois, where we practiced medicine nearly twenty years, and encountered numerous cases of the anomalous affection under consideration; found it so common or prevalent during certain years, that it may be said to have been epidemic, or sub-epidemic, at least.

It is universally conceded, that the face of a country has much influence over its meteoric manifestations; and it is, perhaps, as generally agreed, that the meteoric phenomena, viz.: temperature, vicissitudes, dryness, humidity, play of electrical forces, etc., are not only direct causes of disease, but that they exert the utmost controlling influence also over the vegetable kingdom, governing production, or the staple crops and fruits, during each and every year, thus not unfrequently proving the indirect causes of disease, from the abridgment of food; as famine, partial famine, and even poor diet, are known to be remote causes of pestilence.

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[*] The researches made by the writer, in preparing this essay, during the winter of 1853-54, led to the investigations into the cause of cholera, which were published in the January number of this Journal.

The endemic influences manifested more especially in low, paludal, or marshy districts of country, situated within the temperate latitudes, as is the case with Illinois, are such as to subject the inhabitants to frequent attacks of the common or ordinary forms of intermittent, remittent, and continued bilious fever. So generally is this the case, that few persons emigrating to a *new* country, of this topographical character, even from lower latitudes, escape attack; those from northern regions and elevated mountainous districts, of old-settled countries, being most pre-disposed. It requires a certain high range of the thermometer, or elevated temperature, to develop the endemic influences, as 65° or 70° F. at least, and for the full effect, that this shall be prolonged for weeks or months, as in summer; and in proportion to the intensity and prolongation of summer heat, as a general rule, will be the amount and malignancy of the summer and autumnal epidemics. By continuing to reside for a series of years in a country of this character, the complexion of persons becomes darker, or more swarthy, and many are rendered permanently sallow, icterode, jaundiced, or cachectic, in their appearance, denoting dilapidation or impairment of the general health. Such persons will be found to have acquired visceral engorgements, tumefactions, and indurations, which permanently derange digestion and assimilation, and tend to dropsical effusions and organic affections. Children born and reared in localities where these epidemic influences are of marked intensity, become old, as it were, while young, presenting a lean, wrinkled, palid appearance, with tumid abdomen and stunted stature, and ordinarily betraying evidence of tardiness of perception and a low grade of intelligence.

In the absence of any positive knowledge of the *nature* of these endemic influences, so deleterious to human health, the medical profession, generally, have tacitly accepted, or acquiesced in the hypothesis of the presence of a poisonous air or miasm, called *malaria* or *miasma*. No analysis, however, of the air in the localities most deleterious to human health, have ever detected any substantive entity or poisonous principle in the air, or the slightest departure from a healthy standard, save, perhaps, a smaller amount of oxygen in very hot weather; and the whole foundation of the dogma rests on inference alone. Other topographical regions, as we shall see, are uniformly subject to marked and peculiar endemic influences, differing in their effects from the above, and hence the notion has arisen of sundry kinds of malaria, and the epithet of *marsh* malaria has been applied to the one under consideration. The hypothesis of different kinds of malaria, however, has never come to be as generally acquiesced in, but rather the hypothesis assumed is, that obscure and diverse manifestations of disease, or masquerades of maladies, are ascribable to marsh malaria *modified* by place and circumstances. For the last century or more, this sweeping hypothesis has held dominion over the records of medical philosophy, growing with its growth, and strengthening with its strength; and upon it, as a foundation, are now erected the two superstructural hypotheses of the animalcular and cryptogamous theories of the *essential nature* of malaria or miasmata! It is generally regarded as the product of vegetable decomposition, whether it be held to be of animal or vegetable nature; and yet its endemic effects have been witnessed in arid deserts, where no vegetation ever existed, much less animal remains, to produce it. By the best authorities, the affirmative of the question, as to the endemic presence or substantive existence of malaria, is regarded as wholly unproven, altogether assumed.

Again, the endemic influences most manifest in high, hilly, and mountainous regions within the temperate latitudes, are such as tend to develop the local inflammations, or the diseases classed as the phlegmasiæ; and especially is it the case that thousands in those topographical regions inherit or acquire the tuberculous organization or strumous diathesis, and die prematurely of scrofulous affections, particularly of pulmonary consumption. The characteristic conformation of system into which the topographical or endemic influences present seem to mould this very large class of persons, is a small, slender chest, a long neck, pinched nostrils, ruby lips, light hair and eyes, and a fair, thin skin, accompanied with quickness of perception and acuteness of intellect. These influences are said to be rendered more operative by consanguine marriages, and the taint is generally believed to be transmissible from parents to offspring.

A third very remarkable illustration of endemic influence is witnessed in the subjects of cretinism, who are reared and dwell in the mountain gorges of the lesser Alps, and other deep gorges and valleys of moderately elevated countries in middle and southern Europe, and in middle Asia, and probably in other deep and narrow defiles and mountain gorges of the temperate latitudes in other countries. Goitre, or the Derbyshire neck, is generally associated with the deformities that betoken cretinism, and ascribed to endemic influences of the same nature. The influences are such as tend to idiotic deformities of head, a dwarfish, misshapen person, beastly propensities, and idiocy of mind. Every degree of influence is impressed on subjects; some betokening but little of the taint, while others, on whom the vicious influences fall most heavily, degenerate from a bright early infancy to a state of complete idiocy, and the most disgusting deformity. The taint is not inherited, as the children of cretins removed from the localities grow up without deformity; and is doubtless acquired, as infants from other parts transplanted to those mountain gorges, many of them take on the bias and grow up deformed and debased cretins.

Still another striking illustration of topographical or endemic influence is manifested in persons who work in, or are reared in mines, below the surface of the earth. A considerable proportion of persons, so circumstanced, finally become the victims of a form of anæmia more marked with a perfectly blanched or etiolated expression of countenance, and depraved habit and condition of the system, than are manifested, even, by the subjects of puerperal anæmia, the disease which is the subject of this essay; their blood fades, their strength fails, the skin assumes a transparent alabaster appearance, and a hydræmic state of the system prevails.

These are well-known, uniform, and strongly marked illustrations of topographical influences, not to speak of others; and whether they depend on specific, inscrutable poisons present, or are owing to modifications of the general laws governing climates—modified impressions of the vital stimuli—is not a settled matter. If climatic influences have effected the differences in the physical conformation and complexion of the several races, the doctrine held by many, and which must be taken for granted, if all have descended from one pair, it were more conformable to analogy to impute the endemic influences present in any region to climatic laws, rather than to specific miasms; for let the occupants of the different topographical localities, or elevations, spoken of, be transposed, and their systems tend to undergo the modifications of acclimation, a climo-vital process injurious in proportion to extreme susceptibility, tenderness of age, or faulty organization; the efforts of nature (often overshooting the mark) seem to induce the pathological conditions spoken of. Hence, both the danger and advantage that may result from emigration. Hence, also, the origin of the term acclimated. Native organization renders persons more or less adapted to particular climates, and a change of residence is a great resource for invalids.

It follows, then, that there is no climate, topographical position, or class of endemic influences, present in any one region of the world, perfectly healthful for all races, ages, and constitutions, as a permanent residence the year round. Birds instinctively migrate, to avoid the extremes of heat and cold. Men do the same thing rationally, and escape endemic causes of disease, developed only under extreme thermometrical influences. Transfer a New Orleans negro to Canada, and he falls a victim to the climate in a year or two; the same of the Canadian who takes up his abode permanently in New Orleans. A striking example of *artificial* endemic influence is seen in the cruel process of producing enormously enlarged livers in geese, by confining them in hot-houses, or before fires, and giving them full supplies of food and water, for the purpose of preparing from their livers, thus several fold enlarged and deliciously softened by their best blood, the delicate pie so esteemed by the gourmand, called *paté de foie gras;* and this artificial illustration of endemic influence producing visceral engorgements, is by no means barren of instruction in a discussion on topography, climatic influences, malaria, etc. The result is uniform, so far as we are enlightened, and no one would pretend to explain it, we presume, on the hypothesis of the presence of a malaria, though an epidemic should be thus instituted in the geese quarter by the proprietor of a restaurant.

Topography in aid of medical science, then, is to be studied, with reference to physical causes that are known to modify the public hygiene, by affecting climatic modifications in the surrounding vital stimuli, viz.: *food and drink, atmospheric air, heat, light, and electricity;* all of which being absolutely necessary to life, are, therefore, called *vital stimulants;* and no truths in medical philosophy are better known and established, than that mild or medium impressions are salutary, and extreme impressions hurtful. These axioms hold good in regard to the impressions of each and all of the vital stimulants,—the extremes destroying life, and the mean impressions upholding it and maintaining health. These, then, are the natural causes of life and health, and the natural causes of disease and death of not only man, but of the whole organized world, animal and vegetable; and whether or not there are any other *external* causes of disease, except accidents, is very questionable. As to the existence of any substantive essence, or imagined malaria or miasma, supposed to be the cause of the endemic diseases of a country, we are altogether skeptical, or rather, be it said, we disbelieve the hypothesis *in toto.* Changes in the force, quantity, or quality of the natural, vital stimuli, as applied to, or as acting on constitutions or organizations well or ill-adapted to sustain the impressions, are, doubtless, adequate and sufficient to carry out the purposes of Deity in the rise and fall, the life and death, of man, and all other forms of organized existence. Those being our views, in brief, without detaining the reader with a recital of more than the above general principles bearing on this subject, we proceed to take a summary glance at those physical causes and phenomena in Illinois, that modify the healthfulness of the climate.

Physical Geography.—The Mississippi Valley is flanked on the east by the water-shed of the Alleghany Mountains, the highest altitude of the summits of which is about five thousand feet; and on the west by that of the Rocky Mountains, the highest peaks of which are some fifteen thousand feet high. The two inclined plains from these water-sheds bear forward their surface-waters, from the east and from the west, into a common longitudinal trough—the Mississippi River, which has its sources in the paludal summit-level region (latitude 48° N.) that bounds the valley northwardly, and divides it from the waters that fall into Hudson's Bay, the altitude of which summit is about one thousand feet above tide-water. The whole Mississippi Valley, then, pitches to the south nearly one foot in a geographic mile, by which arrangement all its lateral tributaries are deflected southwardly in traversing the two inclined plains, to pour their waters into the great central longitudinal channel of the valley, which bears off all both right and left, onward and downward to the Gulf of Mexico, lat 29° N. Throughout the entire valley, from the sources of the Mississippi to its mouths, intermittent, remittent, and continued bilious fevers are endemic in summer, strongly *epidemic* in some seasons, and increase in force or grade in descending the river, inversely as the latitude decreases, till, at New Orleans, the highest grade of bilious fever passes into yellow fever, which, is often epidemic there.

The state of Illinois lies mid-way between the sources and mouths of the Mississippi River on the eastern side of it. Along its northeastern border, near Lake Michigan, is another summit-level water-shed, dividing the St. Lawrence valley from the valley of the Mississippi, elevated about six hundred feet above tide, which turns all the waters in a southwestern direction. At the mouth of the Ohio River, the Mississippi is some three hundred feet above tide, consequently, the whole area of Illinois is an inclined plain, facing the southwest, pitching some three hundred feet, and presenting the warmest exposure of any topographical arrangement whatever. The extreme southern limit of the State, at the confluence of the Ohio with the Mississippi River, is in latitude 37° N., and its northern boundary is $42\frac{1}{2}$° N., and it lies between 10° and $14\frac{1}{2}$° of W. longitude from Washington, being three hundred geographical miles long by about two hundred and fifty broad.

This general view of the hydrography and topographical inclination of Illinois, reveals an exposure of the hottest character, combined with stagnation in drainage; or such a very moderate descent southwestwardly, that the whole face of the State is so tardily drained of the surface-water from rains and snows, that cold and humidity in winter, and heat and humidity in summer are inevitable results, until the retarded surface-water is evaporated, after which heat and drought not uncommonly close the season. We will now proceed to speak of the leading topographical features of the different sections of the State.

SOUTHERN ILLINOIS.—Notwithstanding the physical features of the State of Illinois are such as to give it the character of a level country, still its surface in some parts is a good deal diversified. The southern portion of the State, say about one-fourth of its latitudinal extent, is, much of it, very hilly and broken, abounds in lime-rock, cliffs, ledges, ridges, and abrupt gorges, and is generally covered with stately forests of oak, hickory, poplar, maple, linden, sassafras, sycamore, etc. Grape-vines are abundant and attain to a remarkable size, sometimes nearly twelve inches in diameter, and the sassafras tree, which is only a shrub in more northern regions, often presents a trunk eighteen inches or even two feet in diameter. A hot-house effect seems to be produced on vegetation in some localities, resulting from topographical causes and an extraordinary richness of soil, viz.: alluvial bottoms with southern exposure, along the Ohio, Mississippi, Big Muddy, and Kaskaskia Rivers, protected by bluffs and forests from the presence of even a coast breeze from the north. This is the case with the alluvial point or extreme southern terminus of the State, where the city of Cairo is situated; and while it may be said to be geographically the most eligible and magnificent location for a city in the Mississippi Valley, the curse of *malaria*, according to the received hypothesis, but as we render it, extreme impressions of the surrounding vital stimuli, will forever render it an unhealthy place. The same thing may be said of other low, humid, confined, oven-like localities in the southern peninsula of the State. These southern regions of Illinois, particularly along the rivers, are rugged without being picturesque; but proceeding northwardly, towards the interior of the State, the beautiful and fascinating prairies soon appear. We speak from personal observation, having, the Wabash counties excepted, threaded and explored, on horse-back, the whole length and breadth of the State, from the junction of the Ohio and Mississippi Rivers to the Wisconsin line, Fever River, and the shores of Lake Michigan; we have traversed its prairies, some of them full thirty miles broad, without a ravine, or a tree, or a "lost rock" even by which to mark our progress, or guide us in our direction; we have coursed its rivers by steamboat, and its canal and railroads are familiar to us.

MIDDLE ILLINOIS.—The middle portion of the State—say a latitudinal zone embracing one-half of the length of the entire State—has ever been regarded the *ne plus ultra* region for agricultural purposes, and is of unsurpassed beauty and loveliness in its appearance. It used to be spoken of by our friend, the late Hon. George Forquer, as a "belt" of country pre-eminently adapted to agriculture and railroads; and so frequently was it designated by the appellation of the "belt" in his legislative speeches, during the internal improvement mania of 1836, that he was addressed in debate, by a political opponent of less-favored southern Illinois, as "the gentleman from the *belt*." This beautiful champaign character of country extends across the entire State, from east to west, and the same general character of open country, or plains interspersed with groves and margins of forests along the water-courses, is continued west of the Mississippi, through Missouri and Iowa, and so on to the Rocky Mountains. In the heart of this broad belt of fertile country, in the centre of Illinois, is situated the Sangamon River region, the model portion of the State, and a description of this will serve for a type of the whole State.

The soil is a deep, black loam, of variable depth,—say from one to three feet,—often of much greater depth, where the debris of the soil has accumulated by deposit, lying over a chocolate-colored subsoil, of from five to ten or more feet in thickness, and this on a hard pan of blue clay of several feet, sometimes twenty feet, in thickness, impervious to water. Under the blue clay is quicksand, and in sinking wells, wooden curbs, water-tight, are necessary to ensure progress after penetrating the clay. The water below the clay, as well as the surface-water, to some extent, is impregnated with carbonate of lime, decomposing soap, and rendering turbid solutions of acetate of lead or nitrate of silver; in other words, the wells afford only hard-water. The surface water, in the wet season of the year, viz.: spring and early summer, is inconveniently superabundant; for, as little or none penetrates the blue clay, the summit level prairies present frequent sheets of standing water, or ponds waiting the process of evaporation. These vernal ponds are often diversified with archipellagos of gopher hills and cray-fish chimnies; and when the prairies were not burnt over in the autumn previous, the dried weed-stalks often stand six or eight feet high, sparsely, all over those wet prairies. These summit-level plains between the water-courses, then, are not only open prairies, but often impassable morasses, on account of this miry condition of the surface, in the earlier season of the year. The settlements or farms range along the timber-lines, or forest-belts, that skirt the water-courses on either side.

The rivers run in deep, broad gorges, presenting the appearance of abrupt chasms, sunk below the common or general level of the country. The chasms are broad and deep, in proportion to the size of the rivers; the chasm in which the Mississippi River runs will average, perhaps, some seven miles broad; that of the Illinois River, about three or four miles broad. The borders of these chasms are either lime-rock palisades or conical hills, with frequent gorges or ravines between. They are called "the bluffs;" are generally clothed with forest timber, sometimes only with grass. The bluffs are high in proportion to the magnitude of the river, and vary in altitude at different points. The bluffs on the Mississippi are frequently two or three hundred feet high, and sometimes present a palisading of lime-work of this altitude for twenty miles in extent, only interrupted by the frequent narrow rivulet and creek-gorges that cut their way through the rocks. The marginal forests that skirt the rivers are broad, also, in proportion to the size of the river, and vary in width at different points. The skirting forests on the Mississippi, between the verge of the bluffs and the upland prairies, are not unfrequently ten miles broad. In the Sangamon region the creeks even have marginal forests of two or three miles in width, and the timber is lofty, even to the prairie line—bold, lofty oak and walnut timber of the finest quality on one hand, and the most desirable prairie land imaginable abruptly opening along this fine forest growth on the other.

The alluvial land lying in a river chasm between the bluffs, is called a "bottom." It is almost a perfect level from bluff to bluff. In some places the bottom lands are clothed with the heaviest and most dense forests conceivable, and in others they present an open plain, or prairie surface. The river cuts a tortuous channel through this alluvial bottom, at one time hugging the right hand bluff, and then playfully seeking the left. In extremely high water, when a river overflows its banks, the water may extend from bluff to bluff, and the river be, indeed, six or eight miles wide.

This character as regards the rivers and creeks of southern and middle Illinois is universal, there is no exception; and the smallest creeks are miniatures of the Mississippi; the abrupt bluffs, the level bottom, the tortuous channel, the muddy water, absence of pebbles—and question whether you will get through or sink in the mire in attempting to ford—characterize all the streams. There is no such thing as a gradual descent to a river. As you approach a river from the open country or summit-level, the prairie begins to be more rolling near the timber, caused by the sloughs which carry off the surface-water. Along this rolling character of prairie are the cultivated farms, and residences of the yeomen of the country. Finally, the surface becomes hilly and rough, and this character of surface is always clothed with brush or forest timber. Now you are getting into the bluffs. The gorges of the sloughs deepen and widen about in the timber; the hills pitch and swell more and more fantastically, as you approach the river, till, at last, you find yourself on a precipice overlooking the river chasm or bottom, which lies, perhaps, some two or three hundred feet below, and the bluffs on the opposite side of the river gorge full in view.

Some of these views from the verge of the bluffs are of unsurpassed beauty and loveliness. We question whether the human eye ever rested on a more beautiful landscape scene than is presented at the verge of the bluffs west of Edwardsville, at the head of what is called the American Bottom. You stand high above the scene, on the greater curvature of an immense crescent, the horns of which are distinctly defined for twenty miles on either hand, up or down the Mississippi; the towering bluffs of the Missouri side are full in view; and the grand confluence of the Missouri with the Mississippi lies before you in the valley, which is richly diversified with forest and prairie, and the most highly cultivated farms. But beautiful as is this immense bottom, an hundred miles long by an average of six or eight broad, reaching from Alton to Chester, and productive as it is, yielding an hundred bushels of corn to the acre, an hundred years in succession, without manure, still it is like the rice plantations of Georgia, or the shores of an African river, in the production of malarious fevers of the most aggravated forms and pernicious type.

NORTHERN ILLINOIS.—The northern part of the State presents quite a different topographical character. North of a line passing from, say about the mouth of Rock River, eastwardly to Ottawa, and up the valley of the Kankakee, the peculiar characteristics of the more southern rivers are gradually lost; the water in them becomes clear, their channels pebbly, often rocky; their course less tortuous; the banks sloping; the precipice-bound river chasms disappear; the rivers are less affected by spring freshets, or by drought in summer, and the drift of geologists is more common; in some places hundreds of granite boulders appear on a single prairie. The Rock and Fox River Valleys are, perhaps, the best wheat regions in the State, and the water power in those rivers is unlimited. The forests are thin and less lofty than in Southern and Middle Illinois. The face of the country is more rolling, and the prairies more undulating and better drained, than in the Sangamon region; but the soil is not so deep, and is more silicious and gravelly. Wheat is the great staple; corn appears stunted. Upon the whole, it cannot compare with Middle Illinois as an agricultural region, in adaptation for stock raising especially.

THE MINERAL COUNTY OR GALENA DISTRICT.—This region presents the appearance of an interminable jumble of bald hills. The native forest growth, wherever it existed, has been appropriated to smelting uses, and the eye is fatigued with the sameness of the scene, where all the hills seem to be of equal hight, as if cut down out of a level country by sinking surrounding gorges. The city of Galena is built in a deep gorge of these hills occupied by Fever River. There is barely space for one business street along the little, insignificant river, so that the back streets have to be cut, terrace-like, in the hill sides. They are reached by carriages with difficulty and danger. There are few cross streets, it being impossible to ascend the hills in a direct line from the river. One-half of the city has escaped from this gorge, and crowns the summits of the hills, some two or three hundred feet high; and, for the convenience of transit up and down, wooden stairways are erected. There are two climates, therefore, in Galena; the climate under the bluffs being desirable in winter, and that above the bluffs in summer.

Agriculture has been greatly neglected in all the mining country, not half enough provisions being raised for home consumption. The country presents no inviting aspect to the farmer; unlike most other localities in the State, the prairies are broad, and without groves of timber, from Galena to the Rock River settlements, eastwardly, and, therefore, not settled upon; and the consequence has been, that supplies, not only for the mining population, numbering, perhaps, ten thousand, but for about an equal population in the city of Galena, have been hauled from the Rock River mills and farms, or shipped from St. Louis. Despite all these disadvantages, Galena has grown to be a rich and prosperous city, owing to the mineral resources of the surrounding country. It is situated some seven miles up the gorge of Fever River, in the Mississippi Bluffs, and the river is rendered navigable only from the back water caused by freshets and floods of the Mississippi. Were it deprived of these accidental advantages, Galena would be without its shipping list. The completion and opening of the projected railroads to Galena will do much for the mineral country.

The Lake Michigan District.—This region discloses a different topographical character altogether from any portion of the State. The approach from the Des Plaines or the Kankakee River, is over a flat prairie of from twelve to thirty miles broad, constituting the summit-level water-shed between the Mississippi and St. Lawrence Valley. The surface-water of this table is only gotten rid of by evaporation in the main. The soil is thin and sandy, and a clayey hard-pan lies under it, which prevents the water from sinking readily. The Des Plaines River banks are only some twelve or fourteen feet higher, topographically, than the Lake Michigan shore; and in the highest freshets, when the Des Plaines overflows its banks, a portion of its waters finds vent into an arm of the Chicago River, and so into Lake Michigan. The first and highest bed of the Illinois and Michigan Canal, some thirty miles in extent, from Chicago to Lockport, is supplied by water raised by pumps from the Chicago River, a lockage of some ten or twelve feet lift, and by means of a feeder taken from the Calumet River, which rises in Indiana and falls into Lake Michigan, in Illinois, some twenty miles south of Chicago.

The Lake shore is clothed with forest timber, except at two points, viz.:—at the mouths of the Chicago and Calumet Rivers. The immediate shore is a sandy beach, much traveled in early times before roads were opened. Back of this the sand is blown into hills, drifts, or dunes, of greater or less elevation, which increase in hight towards the southern bend of the Lake, where they are an hundred feet high or more, and several miles broad. Thus the shore is heaped up, and is higher than the land back of it, which always prevents any distant view of the Lake. The rivers creep through these sand hills, and disembogue with difficulty—their mouths being all deflected by bars, up the Lake, in some instances many miles, by the powerful north winds.

The Chicago River, since its harbor has been improved by dredging through the sand-bar at its mouth, and the erection of piers, presents a tolerably straight main trunk of about one mile in length, running nearly due east. The main trunk is formed by two branches, one from the north-west, and the other from the south-west, draining, as well as they can, the flat lands lying back from the Lake. The river and its branches are narrow, deep, and navigable, and without apparent current except in time of freshets. On the three sides of this tripod river, stands the flourishing city of Chicago, which, within the last twenty years, has advanced from a mere trading post to be the leading city of the Lakes, having a population at this time—March, 1854—of over 60,000 inhabitants.

Fort Dearborn stands at the mouth of the Chicago River, on the right bank, the highest ground in the city, elevated some twenty or thirty feet above the waters of the Lake. The exceeding flatness of the city plat renders drainage difficult; the surface-water fills all excavations made, except in the dry or autumnal season of the year, not only in the city, but in all the country round about, so that cellars and root-houses cannot be sunk in the ground, but, if had at all, must be constructed above ground: this, however, is not altogether peculiar to the Lake Michigan District. The surface-water is a great impediment to the sinking of cellars in most parts of the State—so much so, that the majority of families are deprived of this most necessary convenience in the economy of house-keeping, to the great detriment of the public health. The humidity of the atmosphere is, of course, very great throughout the State, but probably in no locality so great as at Chicago, or within the Lake Michigan District. We have known the snow to fall six inches deep along the Lake shore, while the ground remained bare six or eight miles west. A large amount of rain falls during the year; there is much dull cloudy weather during the winter and spring seasons. The spring is always retarded by cold, and frequently deluged with rains, and at best greatly interspersed with the chilling "Mackinaw breezes," that are often felt thirty miles westwardly in the interior, and are characterized by great humidity and coldness. After hoping, and expecting, and waiting in vain for genial summer, fires are often found necessary to comfort as late as the fourth of July. From mid-summer on till November, the climate of this region is paradisiacal.

The Military Tract.—This attractive region lies in the forks of the Illinois and Mississippi Rivers, and belongs to

Middle Illinois, but presents some peculiarities in its topography worthy of a passing notice. The southern, narrow peninsula is an elevated spine of lime rock, along the Illinois, and a fine alluvial bottom along the Mississippi, six or eight miles broad. This elevated spine is of an acute triangular shape, and is covered with timber. Proceeding northwardly on this spine or elevated bluff, (not unfitly compared to the back bone and ribs of an immense animal,) the timber finally begins to grow thin, and at last the prairies appear. The prairies are, at first, very broken, having rather the appearance of bald hills than prairies, and this very rolling character of country prevails throughout all the southern portion of the Military Tract, up to the Quincy and Rushville regions. The prairies are rolling, dry, and not so wide as to deter settlers from locating anywhere upon them; hence the population is more evenly spread over the counties in the Military Tract than elsewhere. The surface-water is less annoying, and the drainage of the country better; and really this region should be the healthiest portion of Illinois. It probably is, and yet the causes which produce the *nursing sore mouth* exist here; for we have met with inveterate cases of it in different localities within the limits of the Military Tract, which will be referred to in our analysis of cases.

METEORIC PHENOMENA.—Sanatory surveys, the object of which is, to point out and elucidate both the general and local causes of the endemic diseases of a country, which are always obscure, carefully investigate the topography and meteoric phenomena. Following this method, we proceed to take note of the prominent peculiarities or characteristics of the meteoric phenomena in Illinois, or the constitution of the seasons governing production—the abundance or scarcity of the crops and fruits from year to year, and the concurrent state of the public hygiene. Without attempting to be minute or technical, our aim will be to develop the leading facts that bear upon the etiology of diseases, especially the *nursing sore mouth affection*, the subject of this essay.

We well remember the three most prominent evils that beset us in our early peregrinations over the prairies, and which constituted the chief drawback to our happiness, viz.: high winds, wet prairies, and poor diet. We lost about twenty pounds avoirdupois of ourself during the first spring and summer—the first half year of our pilgrimage there—when of adipose or muscular tissue we had never a superabundance, and can, therefore, speak experimentally and feelingly of meteoric influences. Let the reader imagine himself a practitioner of medicine there, and called, in the month of March, to see a patient twenty-five miles in the country (a not uncommon ride in those sparse settlements), his horse up to the fetlock in the mud every step when on land, and when in the water, in crossing sloughs and fording creeks, no matter how tall the steed, the rider's feet must be unstirruped and folded kimbo on his nag's sides, or his boots will fill with water; let him fancy Boreas let loose, and, unobstructed by hill or copse, bestowing his best endeavors on him the whole distance; let him consider the amount of disintegration of the system, blown off in the shape of insensible perspiration during the day's ride, and consequent call for repletion; and then let him seat himself at the humble family board, and partake of their best bill of fare, viz.:—fried bacon and hot biscuits, raised with lard, coffee, of course, to wash it down. The potatoes had all been frosted during the severe winter, the cabbages too; of turnips, the season of sowing was so dry they did not come up; of fruits they had none, for it was but their second year in the country, and it is rare that a settler raises any fruit short of a residence of ten years there. Now, the reader can almost make oath that, whatever may be the nature of the acute attack of his patient—phlegmasial, malarial, typhoid, or puerperal—*meteorology* and its influence over the state of the vegetable supplies—the absence of vegetables in the dietary—has special agency as causation of this case, or aggravation, at least. This is not a solitary picture, but a general illustration of the state of things we encountered in the winter and spring of 1835, the second year of our meteorological and medical observations at Springfield, Illinois, the present seat of government of that rapidly progressive State.

The Rains and Snows that annually fall in Illinois, equal, if not exceed, the average fall in the same latitudes and elevations, anywhere in the United States. The whole State is a low country, and but little snow generally lies upon the ground, during winter. In the winter of the "deep snow," 1831–32, when all the eastern harbors nearly were closed by ice, tradition says: "the snow was about two feet deep throughout Middle Illinois, and that winter lingered in the lap of May." We have seen the snow some fifteen or eighteen inches deep, two or three times, in the course of nearly twenty years, and the lingering disposition of winters of this character, has sometimes interfered with planting and sowing in the spring, and abridged the crops of the succeeding summer and autumn; still it is undeniable that the want of snow during the winter, as a protection to the wheat, is generally everywhere felt in the State.

There is this about the rain, and which bears immensely on the vegetable productions, and, no doubt, the general health of the country; "it never rains, but it pours." From midsummer, on through the maturing of the latter harvest, the sowing of turnips, and of wheat, there is frequently great and prolonged drought, with excessive heat. We remember one season, 1838, in which there was no rain in Middle Illinois, not even a shower, from July to January; and the heat was excessive in the months of July, August, and September. The crops, particularly potatoes, turnips, cabbages, etc., were very short. The drought was severe and extensive; the rivers always disposed to dry up in summer, in Illinois, went totally dry that summer, and in some localities, the live stock strayed off in search of water, and famished in great numbers.

Recurring back to the year 1834, the same hot, dry character of season prevailed, following a frosty, blighting spring.

The crops and fruits were cut short throughout the State. The following winter was rigorous, and the spring and summer of 1835, excessively wet, so much so, as greatly to embarrass and abridge farming and gardening operations. About midsummer, excessive heat again set in, and this was the most sickly season ever known in the State. There were hardly well persons enough to take care of the sick. We paid that spring, twelve dollars a barrel for flour, in the heart of that wheat-growing country, and two dollars a peck, (eight dollars a bushel) for potatoes, to plant in the garden. Seasons marked by the characteristic here given, have always, according to our observation, been attended with great sickness and mortality; and we have been led to infer that there is an important connection between the state of the crops, or dietary of a country, and the state of the public health.

The reader should have personal observation of a thundergust, and experience one ten miles out on the prairies of Illinois, in order to fully appreciate the furious majesty of the scene, and understand the applicability of the adage "it never rains but it pours." The early spring not unfrequently, opens dry and beautiful, after the melting of the frosts and snows, and plowing, sowing, and planting, are opportunely accomplished; when, in the middle of May, or first of June, the thundergust-rains set in, and not unfrequently keep the country deluged till midsummer; drowning out the hopes of all the flat prairie farmers, and washing out the labors of those, on the more rolling farms. We have seen acres of young corn washed out of the furrows, and whole fields of it submerged, and doomed to a yellow sickly abortion. Seasons of this character, are incompatible with the growing of a crop of potatoes, the great staple succulent vegetable in all parts, and it proverbially happens, that one extreme follows another, and that the drought of the latter part of the season prevents the growing of turnips, and the maturing of garden roots. Indeed, the growing of garden vegetables, in general, is much neglected by the early settlers; culture with the plow in the cornfield, is the great and all absorbing business of the planting season; for, according to the crop of corn, so is the amount of the marketable staple, pork, from the annual returns of which, the hard working yeomen rely to pay for their dry goods, groceries, etc., etc.; so that we may say, there never was, during the period of our observations, a full supply of succulent table vegetables raised, consumed, and put up for winter use; and in the cold, wet seasons, there was a most lamentable deficiency, and this scanty supply was often frosted, and still further abridged for the want of cellars and root-houses for their preservation.

An incident, not irrelevant, is here introduced, illustrative of the deluging summer rains that fall throughout this prairie country, and the waspish character of the creeks, that are often swollen by a single shower so as to be past fording. A little dried up rivulet, even—nothing, in fact, but *a place for a creek*—a gorge between the lime-stone bluffs, with, at most, but a stagnant pool now and then along the deep holes and turns, to mark its course, will verily assume a most formidable character, often in a few hours, so as to jeopardize, if not destroy, the life of whomsoever may attempt to ford its swollen tide. The locality or scene of the incident is as familiar to us as the road to the mill; we have often stepped the stream at the identical ford where the drowning occurred, without wetting the sole of our boot, and laid hold of the boughs of the water-birch the fair one clung to, that, like the boughs of a Pope's willow, reach down their arms as if from heaven, to rescue such loveliness from the grave, or to mourn over it when consigned to an early tomb.

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The torrents of rain continue to fall till after the summer solstice, and sometimes until the middle of July, when the flood-gates of the firmament are closed! heaven's artillery ceases, and the raining process is imperturbably suspended. We question whether one of Espy's mammoth fires, or Vaughan's heaven-piercing lightning-rods, or Cheop's or Popocataptl, even, would so galvanize the clouds as to induce further out-pourings.* But there is no occasion for more; the rivers and creeks are all out of their banks, and extend from bluff to bluff; every upland pond-hole, marsh, lake, etc., is filled; and all the sink-holes and hollows along the bottoms are brimmed, and stored with fishes and reptiles, doomed soon to flap and flounder in the mud, and then to pass into their ultimate elements under solar heat; the great body of the summit-level country is in an equivocal teraqueous condition, and the soil and subsoil saturated to the blue clay. Another play of meteoric phenomena now presents. The unobstructed sun is busy through Leo, Virgo, and Libra, n restoring back to the air this flood of waters; and under powerful insolation, high temperature, and rapid evaporation, and consequent elimination of electricity by day, and a reversed process, powerful upward radiation, dew-sopping, and cooling, by night; and this debilitating, extreme impression of the vital stimuli prolonged for weeks and months, everybody nearly falls sick. The full development of these evident causes of sickness is witnessed sometimes early in July, while an abundant and young vegetation is fresh and luxuriant, even before the mid-day of its perfection, and never a blight has touched it; but while in its rankness, superabundance, and noon-tide of life, it takes from the air the gases hurtful to man and animals, and returns oxygen or pure vital air, belying the hypothesis of malaria from vegetable decomposition, unless it be thrown back upon the mould of preceding years, the constituents of the soil, which are now rather passing into new organic vegetable life again.

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* It appears from the most modern views of meteorologists, that water is contained in the air in solution, as salt is dissolved in water; that electricity is the chief agent by which it is suspended—the electricity being produced by the friction of the air against the earth's surface; that evaporation is effected at the expense of heat and electricity; and that the air, surcharged with vapor, being specifically lighter, rises above the lower stratum of the atmosphere, which becomes an insulating medium between the clouds and the earth. To produce rain a connection must be formed. Espy has proposed to effect this by fire; Vaughan by a rod of immense elevation; and by thus drawing off a charge of electricity from the higher strata, portions of the dissolved water must be precipitated in rain. This view explains the meteoric phenomena of the low flat regions under consideration, and why it is either very wet or very dry; and, also, the reason why mountainous regions are more uniformly rainy and misty. It has been even suggested by Prof. Vaughan, that the pyramids of Egypt were built in order to the production of rain during the dry season.

The Spring Frosts are sometimes severe, and occur late, blighting the fruits and crops extensively. Peaches, apricots, plums, and even apples, are rendered somewhat uncertain, owing to the severity and lateness of the spring frosts, incident to the sudden changes of temperature that occur after the showers set in, of which we have spoken. A frost occurred in the spring of 1834, about the middle of May, when the growing crops—corn, peas, beans, etc.—were several inches high, that killed, outright, all the crops, fruits, and tender vegetation, even the new growth of the forest twigs, a foot long, and foliage full grown. The forests presented an autumnal gloom; the leaves fell, and were succeeded by a new budding process, and the shooting forth of fresh foliage. The blighting influence of this frost in the spring of 1834, and the withering drought of the summer immediately succeeding, cutting off and abbreviating all the fruits and succulent vegetables of the country that year, has always appeared to us to hold a direct relation to the extremely sickly season that followed the summer of 1835. Repeated coincidences of a like character have shown a relation—like cause and effect to exist between short crops of vegetables and fruits, and sickly seasons.

The Autumnal Frosts are generally postponed until the summer crops are matured, and, therefore, do but little injury. Occasionally the crops are abbreviated by an early autumnal frost, but oftener by drought at this season. The native fruits are few, but the crab-apple and wild-plum are hardy, and generally abundant, though they are not sufficiently appreciated by the early settlers before orcharding can be cultivated, and the products help to protect the public health. The gooseberry and black currant are also natives, and when transplanted to gardens, and cultivated, are great bearers, and the fruits exceedingly fine; but their cultivation is also neglected. There is no disposable force to be spared during the rail-mauling and prairie-breaking years of a settler's efforts for a wide farm, and consequently fruit culture and gardening are neglected, and the health of every family is thereby jeopardized.

The proposed limits of this essay will not allow us to discuss in full all points connected with the topography of this great, beautiful, rich, and wonderful State. Its geological formations, coal and other mineral deposits; its fauna, and the rich profusion of its native plants, must be passed over. All these are matters of interest to the lovers of natural science, but have little bearing on the subject of our inquiry, which is strictly medical.

PART SECOND.

CRITICAL ANALYSIS.

Art. VI.—*Traité des Fractures et des Luxations.* Par J. F. Malgaigne, Chirurgien de l'Hôpital Saint Louis, etc., etc. Avec un Atlas de 30 Planches, 2 vols. J. B. Bailliere. Paris: 1847–1855. . . pp. 1950. . .

[*A Treatise on Fractures and Dislocations.*—By J. F. Malgaigne, Surgeon of the Hospital St. Louis, etc., etc. With an Atlas of thirty Plates, etc., etc.]

[*Continued from Page* 278.]

The second volume of M. Malgaigne commences with some general remarks on the confusion existing in reference to the nomenclature applied to various dislocations, and concludes that, as yet, perfect precision in this respect has not been attained. The safest method would be to follow custom, were it not that many errors must thus be sanctioned.

"As for myself, I shall endeavor to employ such terms as are most clear, exact, and admit of being most easily remembered. And, although I care more for things than words, I shall aim so to describe different lesions, as to avoid misapprehension."

He recognizes three great divisions of dislocation: the traumatic, pathological, and congenital. Although the traumatic are more frequent than all the other varieties, still he asserts, that these luxations are very rare. Of one thousand five hundred and fifteen patients treated by Dupuytren, in 1828, there were but twelve luxations, and of three thousand nine hundred annually received from 1818 to 1820, in the Hôtel-Dieu, of Lyons, under the care of M. Janson, there were but twenty affected with dislocations. The relative proportion of these cases, however, as M. Malgaigne very properly observes, depends greatly on the situation of the hospital—for example, at the St.

Louis, where many cases of injury are admitted, of six hundred and nineteen patients under the care of our author, in 1849, there were twenty-four suffering from the accident under consideration. In visiting the British hospitals, we think it will be found, for the same reason, that more cases of dislocations are treated at the London Hospital, than at any other in that metropolis. In examining this subject, Dr. Norris found that, in ten years, for every nine hundred and fifty-nine fractures admitted into the Pennsylvania Hospital, there were ninety-four dislocations. Under the head of Etiology, we have some interesting observations on the influence of age, sex, seasons, the liability of different joints, and of different constitutions. Sir Astley Cooper maintained, that old persons are much less liable to dislocations than those of middle life, and that young persons are also very rarely the subjects of dislocations from violence. M. Malgaigne, is of the same opinion in reference to children, but declares that Sir Astley's doctrine is by no means true as regards the aged, and in proof adduces the following statistics of cases, collected at the Hôtel-Dieu and at the St. Louis—the last having been under his own observation.

Age.	Hôtel-Dieu.	St. Louis.
From 2 to 5 years.	1	"
" 5 " 10 "	4	3
" 10 " 15 "	8	5
" 15 " 20 "	29	7
" 20 " 30 "	72	21
" 30 " 50 "	182	42
" 50 " 65 "	154	29
" 65 " 70 "	42	4
" 70 " 75 "	19	3
" 75 " 90 "	18	"

From this it would appear that luxations are very rare in early infancy; that they gradually increase in frequency to the age of fifteen, and again, suddenly, to the age of fifty years. Then, instead of decreasing, as stated by Sir Astley Cooper, for the next fifteen years the relative proportion is greater than at any other period of life. Even after the age of sixty-five, the proportion is far beyond that of the adult. Sir Astley, as is well-known, attributed the rarity of dislocations in the aged, to the softened state of the extremities of their bones, which renders them more liable to fracture than to dislocation. This explanation, says M. Malgaigne, is as destitute of foundation as is the assertion based upon it. In the volume on Fractures, page 3, our author has shown that, after sixty years, the relative proportion of fractures diminishes instead of increases, and the facts already adduced prove that old age is less subject to fracture than to dislocation.

As to the influence of sex, we may state, that the female, in comparison with the male, is more liable to fracture than to dislocation, even during all periods of life. When preparing for our first visit to the hospitals of Europe, at the suggestion of the late J. Kearny Rodgers, we resolved to question the oldest and most experienced surgeons, in reference to the number of cases of dislocations of the femur, in the female, which had come under their observation. The inquiry, even when proposed to such men as Mr. Stanley, invariably required quite a retrospect before they could refer to a single case. Within the past six weeks, the writer has reduced a dislocated femur (traumatic), in a girl seven years of age. We know that Sir Astley Cooper is disposed to question the accuracy of the diagnosis in this instance, reported at this early age, but it should be remembered, that he has himself given the details of one which occurred at the same period of life. M. Malgaigne states, that of thirty-four cases of luxations of the femur at the Hôtel-Dieu, but eight were in the female, and of seventeen seen by himself, all but *one* were in the males. As to the extreme periods at which the accident has been observed, we may here state that Lisfranc reduced one in an infant of eighteen months, and Gauthier saw another in a female eighty-six years of age. The rarity of dislocation in the female, as well as in infants, is according to our author, a sufficient refutation of the doctrine of Sir Astley Cooper, that persons of lax fibres are those in which the predisposition to dislocation most strongly exists. Is not a more rational explanation to be found in the fact, that the subjects alluded to are far less exposed to the violence by which the accident is commonly produced.

Pathological Anatomy.—This is by no means on a level with that of fractures. Opportunities for dissection are rare, and experiments on animals are more difficult and less satisfactory. Our author examines the subject under the following heads :—1. The condition of the parts in a recent luxation. 2. The changes in old dislocations. 3. The mode of reparation after reduction. Our limits will permit us to notice only those points which bear on the difficulties in the reduction, as, without an accurate knowledge of these, our practice must be irrational and unsuccessful. In recent luxations the principal obstacles to reduction arise from the muscles, ligaments, and the bones—M. M. Vœlkers and Michel, have attached much importance to atmospheric pressure. In old dislocations, the most powerful obstacles are caused by new ligamentous or fibrous adhesions. In a recent luxation, according to our author, the muscles may resist: 1. By simple or physiological retraction. 2. By the force of tension. 3. By contraction. 4. By pathological retraction—the result of inflammation. Sir Astley Cooper speaks of the *tonic* contraction of the muscles, firmly maintaining a dislocated bone in its new position. Bichat applied the terms *contractility of tissue* to designate the slow, insensible shortening of muscular fibre to what is known to modern physiologists, as *tonic* contraction, and to which Boyer attributed an exaggerated influence, not only in producing but in preventing the reduction of dislocations. The *pathological retraction* of M. Malgaigne, the result, as it is, of inflammation, is at times a source of serious difficulty, and if rudely encountered, may give rise to extensive lacerations, suppuration, gangrene, and even tetanus.

"For this reason," says our author, "it has been the rule of practice, from the days of Hippocrates to the present, not to attempt reduction until the inflammation has been subdued by appropriate treatment."

Professor Gunn, of the University of Michigan, has published a paper in the *Peninsular Journal of Medicine*, for July, 1855, in which he opposes the views commonly entertained in reference to the influence of the muscles, in resisting the reduction of dislocations. The principle he seeks to establish is:—"that in luxations of the hip and shoulder, the untorn portion of the capsular ligaments, by binding down the head of the dislocated bone, prevents the ready return over the edge of the cavity, to its place in the socket; and that this return can be easily effected by putting the limb in such a position as will effectually approximate the two points of attachment of that portion of the ligament which remains untorn."

The untorn portion of the capsular ligament, in his opinion, constitutes, therefore, the chief, if not the only, opposition to our efforts at reduction. The same doctrine was maintained by Desault, but we believe the number of dissections yet made, is insufficient to establish its truth. Those made by Sir Astley Cooper, led him to remark that, "the capsular ligament is torn to a great extent," and both MM. Nelaton and Malgaigne are inclined to believe that the cases are rare in which the ligament offers the chief obstacle to reduction. In November, 1846, we witnessed the dissection of a dislocated femur, (upwards and backwards,) made at St. Bartholomew's Hospital, London, by Mr. Stanley, and the appearances presented corroborated the views of our author. In concluding his remarks upon this subject, M. Malgaigne gives us the following *resumé*:—

"In reference to their reduction, luxations may be embraced under these four divisions: 1. Those accompanied with inflammation, requiring the postponement of their reduction. 2. Recent luxations in which we have to encounter only physiological muscular retraction, and which require skill rather than force. 3. Recent luxations with interlocking of the bones, the interposition of ligaments rendering force sometimes necessary. 4. Luxations of long standing, in which either the state of the muscles or the fibrous adhesions, invariably existing, absolutely demand the employment of force."

In the reduction of dislocations, therefore, we have two distinct methods, viz.: the moderate and the forcible. This subject has been so fully discussed by Drs. Markoe and Reid, in the January and July numbers, (1855,) of this Journal, that we shall notice but briefly the remarks of our author, upon the best method of applying extension. The late Bransby B. Cooper, in his *Lectures on the Principles* and *Practice* of *Surgery*. Am. Ed. p. 276, observes that the use of pulleys appears to be confined to the English and American Surgeons, and "in France, it is said they are never employed." We think we may safely assert, that American surgeons are generally abandoning this method of extension, as the views of Dr. Reid of Rochester, N. Y., become more and more widely promulgated, but M. Malgaigne asserts, in opposition to Mr. B. Cooper, that the pulleys introduced by Ambrose Paré, about the year 1672 or 1675, having passed through various vicissitudes, maintain at the present time, a pre-emimence to which they are justly entitled. After noticing the various auxiliary means to which surgeons have resorted, our author remarks:—

But all of these must henceforth yield to the inhalations of ether and chloroform. It is to the latter that we must have recourse, whenever we would overcome muscular contraction, although it is well for the surgeon to be acquainted with other means when chloroform cannot be obtained. Dr. Reid, as our readers will remember, regards complete anæsthesia as a detriment instead of an advantage, as the muscles are our most efficient assistants in reducing, by manipulation, according to his method, although he would not apply his remarks to reduction by forcible traction or mechanical means.

Dislocation with Wound of Blood-vessels and Nerves.—Some interesting cases are referred to in this chapter, two only of which occurred at the elbow-joint, and were reported by Boyer, and Samuel Cooper. In our own practice we have met with two instances of compound dislocation of the elbow, with rupture of the brachial artery. Both patients were young, of good constitutions, and in both instances we succeeded in saving the limb.

Complication with Fracture.—This, our author asserts, is very rare. Of two thousand three hundred and fifty-eight cases of fracture admitted into the Hôtel-Dieu, in four only was the fracture complicated with dislocation. However, at the St. Louis, during a service of seven years, M. Malgaigne met with thirteen cases in one thousand and fifty-four fractures. The complication is often overlooked, and our author has the candor to acknowledge, that he has himself been guilty of this mistake. When the complication exists what is the appropriate treatment? Pasicrates, before the christian era, proposed that the luxation should be first reduced, and afterwards the fracture. Aristion, advised that attempts should be made to accomplish both objects at the same time. Heliodorus and Guy de Chauliac approved of the instruction of Pasicrates, and the same method of treatment was afterwards recommended by J. L. Petit. The latter, however, was in error, when he added that reduction is impossible, when the fracture is so near the joint as to leave no part to which extension can be applied, for it is not by extension, in such cases, that reduction is to be made.

Sir Astley Cooper regarded this complication as "generally incurable," especially when the head of the humerus is the part involved, for he asserts, "let the surgeon do what he will, the head of the bone will probably remain in the axilla," etc., etc. De Lamotte, Laroche, Gordon, and Houghton, have reported cases, in which they succeeded in reducing the dislocated bone, although, in these cases, the fracture was not through the cervical neck of the humerus. In the latter case, Dupuytren, with Sir Astley Cooper, believed that the skill of the surgeon could avail but little. Now, M. Malgaigne informs us that, in one thousand seven hundred and seventy-seven, Bottentuit was successful in two cases of the kind, and that M. Baroni has recently succeeded on the sixteenth day after the accident. More recently still, M. Richet has reported in the *Union Medicale*, (1852, p. 499,) a case in which, with the fingers, he pressed the head of the humerus into its natural situation. Those interested in this subject, will find a very interesting paper in the *New York Medical Times*, for July, 1855. By Dr. John Watson, of the N. Y. City Hospital. Dr. W. has given the details of two cases, in which he succeeded in reducing both the dislocation and the fracture.

M. Malgaigne quotes two cases of dislocation of the femur, complicated with fracture, successfully treated by M. Etève and Bloxham. But our space is too limited to dwell longer on this topic, and we conclude our notice of the remarks under this head, with the rule of practice inculcated by our author:—"In the first place, attempt immediate reduction; should this fail, promote the union of the broken ends, and afterwards try again reduction. Should all our efforts prove unsuccessful, we must then try to restore to the limb its functions, by well-directed and persevering movements."

Passing over our author's general observations on pathological and congenital dislocations, to which, some sixty-seven pages are devoted, we come to the consideration of the special forms of dislocation. We do not pretend to follow strictly the order in which these are discussed. In the first place, we will notice our author's remarks on dislocations of the cervical vertebræ. Sir Astley Cooper, as is well-known, states that he never witnessed a case of the kind; the injuries in this region which came under his observation, "having all proved to be fractures with displacements." M. Malgaigne has collected three cases of luxation of the atlas from the occipital bone, which were observed by Lassus, Palletta, and M. Bouisson. From the details of these cases, however, it would seem that the displacement was not complete, although the accident in all, was at once fatal. Sir Charles Bell, saw two instances of sudden death from a separation of the atlas and axis; and M. Duméril reported another case to the Academy of Medicine, on the 6th of October, 1840. The difficulty in forming a correct diagnosis in these cases is very great. The position of the head is by no means pathognomonic, yet it is, of itself, sufficient to arouse the suspicion of the surgeon. If, after a careful examination, an unusual depression is felt between the atlas and the axis, with a projection posteriorly, or even along the spinous process of the axis; if the pain is confined to this situation, and the head can be no longer rotated; and finally, if the atlas can be felt, strongly projecting at the upper part of the pharynx, the probability becomes almost a certainty, and preparations should be at once made for reduction. True, but little can be expected from treatment; yet, the case reported by Mr. Benj. Phillips, in the *Medico-Chirurgical Transactions*, vol. xx., p. 78, shows that, even after fracture of the atlas and separation of the articulating surfaces of the occiput and the axis, life may continue for forty-seven weeks.

Luxation of the Radius.—Our readers will remember the interesting paper of Dr. Markoe, on luxation of the head of the radius backward, etc., etc., published in the May number of this Journal. Dr. M. considers this luxation physically impossible, without a fracture of the inner condyle of the humerus, and refers to the few reported cases that have fallen under his observation. M. Malgaigne has collected twelve cases, the details of which, he states, are generally so imperfect, that it is difficult to decide whether the dislocation was complete or incomplete. He has himself observed one case, in which he is positive there was no fracture. The accident was produced by a fall, which was immediately followed by a cracking noise at the elbow, severe pain, and considerable tumefaction. The forearm was strongly pronated and held in a semi-flexed position by the other hand. There was deformity at the elbow joint; the tumefaction concealing the projection of the humeral condyle, whilst, posteriorly, and a little externally, the head of the radius could be distinctly felt, rolling beneath the fingers, when the arm was placed either in pronation or supination, and its cup-like depression was readily detected. The forearm admitted of extensive movements; but pronation was easier than supination, and extension than flexion. These movements produced, moreover, a kind of crepitation; although there was, in his opinion, no fracture. He adds that, in all of the cases reported, there was no doubt of the displacement of the head of the radius, backward; but, what is remarkable, the other symptoms resembled those of incomplete luxation, or, rather, of the luxation forward. The position of the forearm, therefore, has no real value in forming a diagnosis, and the only sign entitled to confidence is the well-marked projection, either of the head of the radius, or the condyle of the humerus. Our author refers to the tendency of the parts, after reduction, to become again displaced, and, from the strong disposition to this, manifested by some of the cases, it is exceedingly probable that the luxation was complicated, as in those reported by Dr. Markoe, with fracture of the inner condyle. We may add that, in addition to the cases collected by our author, another has been referred to by Mr. Lawrence, of London, which was seen by himself.—(*Lectures on Surgery, London Medical Gazette, July*, 1830.

Luxation of the Thumb.—Our author awards to Mr. Hey, of Leeds, the credit of having first properly described this accident, and the difficulties connected with its reduction. He enters into the examination of the causes of these difficulties. They have been attributed to muscular action, and the shortness of the lever to which the extending force can be applied. As regards the first, it is well-known that it does not prevent the reduction of larger bones, and even syncope does not facilitate the operation. The second depends upon the means employed, and cannot apply to those cases in which traction is carried to such an extent as to excoriate the integuments, or, as in the case mentioned by Bromfield, in which the thumb was completely torn off by the surgeon's efforts at reduction. After noticing the various opinions in reference to the obstacles to be encountered, our author is unable to advance any which is perfectly satisfactory, although he is inclined, with Mr. Vidal, and Mr. Fergusson, to attribute it to the interlocking of the head of the metacarpal bone between the short muscles of the thumb. The different proceedings adopted in the reduction of this dislocation may be included under the following heads: extension, simple pressure, and pressure accompanied with flexion, forward and backward. Extension alone, M. Malgaigne regards the worst of all the methods. It has failed in the hands of Hey, Evans, Desault, Dupuytren, Boyer, Roux, I. Cloquet, M. Gensoul, M. Velpeau, and others. Simple pressure much more frequently succeeds, although this, too, has failed, even when tried by MM. Velpeau, Gerdy, and our author himself. The same observation applies to pressure united with flexion. And why, asks M. Malgaigne, have all of these methods failed? The true cause he fails to present to the reader.

If anything were needed to make the surgeon avoid the application of too much force in these cases, it might be found in the disastrous results reported by Bromfield, and, in another instance, related in the clinical lectures of Dupuytren, in which a patient, æt. 67, lost his life from the inflammation, suppuration, and mortification following too long and violent efforts at reduction. Exsection of the head of the bone, as practiced by Evans, he would restrict to those cases complicated with a rupture of the integuments. He barely alludes to the proposition of Sir Chas. Bell, to divide the lateral ligaments with a cataract knife, and remarks that, he once proposed to divide, at the same time with the ligaments, the muscles which formed the external margin of the button-hole opening which embraced the head of the bone. Time will not permit us to refer to all of the various methods proposed in the treatment of dislocations of the thumb. An excellent summary of them, is furnished by our author, and, in addition to the writers mentioned by him, we may allude to a paper in the *Revue Medico-Chirurgicale*, for April, 1855, written by M. Langenbeck, and communicated by M. Verhæghe, of Bruges. The method proposed by M. Langenbeck, after all, differs but little from that practiced by Roser, and which consisted in making dorsal flexion of the dislocated phalanx, and then depressing it upon the head of the metacarpal bone. This plan has been not unfrequently adopted by American surgeons. An excellent mode of applying the extending force is, by means of the clove-hitch, or sailor's knot. It has the advantage of not slipping, nor does it become tightened by the increase of the extension. It is far superior to the plan recommended and delineated in Sir Astley Cooper's Treatise on Fractures and Dislocations.

Luxation of the Fingers.—Sir Astley Cooper observes that dislocation of the phalanges of the fingers is "but rare," and that, when it does occur, it more frequently happens between the first and second, than between the second and third. He has given an illustration of a case in which the second phalanx was thrown forward towards the thecæ, and the first backwards. In November, 1846, we saw a patient at University College Hospital, London, who had suffered for three months from a similar dislocation. Mr. Liston succeeded in reducing it by making traction with a key-handle. French surgeons, Mr. Liston remarks, deny the possibility of this accident. M. Malgaigne states that he has seen two cases of dislocation of the digital phalanges; that M. Leger has communicated another to him, and that, in all, he has been able to collect, six others—of the nine cases, three were in the ring finger; three, the little; one, the middle; one, the index; and in one, both the middle and ring finger were luxated.

Dislocation of the Hip.—After a critical examination of the terms employed by writers, from Hippocrates to Sir Astley Cooper, to describe the different forms of dislocation to which the femur is liable, M. Malgaigne presents us with his classification. The luxation backward, with him, is the iliac and ischiatic; forwards, the ilio-pubic and the ischio-pubic; upwards, the supra-cotyloidean; downward, sub-cotyloidean and sub-perineal. Of the sub-perineal variety he has collected but three cases; the first reported by D. Amblard, in 1821, the others by Professors Parker and Pope, of our own country, in the March number of this Journal, for 1852. About one hundred pages are devoted to the consideration of dislocations of the femur, traumatic, pathological, and congenital, and we know not where so complete a summary of the present state of our knowledge on this subject, can be found.

Our time will permit us to dwell but briefly on one of the more important points here discussed, viz.: the treatment of dislocations of the femur. Sir Astley Cooper insisted that the pulleys are indispensable in their reduction, yet the late Mr. Morgan, of Guy's Hospital, for more than twenty years before his death, was accustomed to accomplish this without resorting to these "indispensable" agents, and he maintained that they are quite unnecessary. When called to a recent case, he placed his heel between the thighs and made extension downwards. In many instances, he derived advantage from flexing the affected limb, with the knee bent on the body, and, at the same time, making forcible flexible rotation. Mr. Birkett, the successor to the late Bransby B. Cooper, in the same institution, has published a communication in the London *Medical Times and Gazette*, for March, 1854, in which he states that he has succeeded, by Mr. Morgan's method, in reducing almost all forms of dislocation, and he asserts that the special rules laid down in books, as to the direction of the traction to be observed in each, have not been found of so much practical importance as they were supposed to be. Dr. Physick, as well as Dr. Nathan Smith, often succeeded in reducing dislocations, even of the femur, without the aid of pulleys, and it is recorded that Paulus Ægineta and Hippocrates met with similar success. Dr. John Watson has collected sufficient evidence upon this subject to show that this practice is by no means of modern origin (*N. Y. Medical Times*, June, 1853), and the same inference must be drawn from the pages of M. Malgaigne, yet there can be no doubt that the labors of Dr. Wm. W. Reid, of Rochester, N. Y., (*vid. Trans. Med. Soc., State of N. Y.*, 1852; or July number of this Journal,) have done more than those of any other surgeon, to establish the method of reducing dislocations of the femur without the aid of pulleys. Within a few weeks past, we have had occasion to avail ourselves of his suggestions, and in less than a minute we succeeded in reducing a femur which had been dislocated for nearly three weeks. We confess our inability to find the *analogue* of "Reid's method" in any of the various plans of treatment described by M. Malgaigne. We see by the journals that British surgeons have resorted to it with success, and we doubt not ere long it will be tried in France. When Roux made his famous voyage to London, in 1814, he claimed for French surgery the glory "d'avoir amené au plus haut degré, possible de simplicité les procédés de reduction" in dislocations; but sure we are that, now, "*sans trop d'orgeuil*," we may appropriate this glory to the surgery of our own country. But, as to the general "doctrine *des luxations*," by which, to use Roux's own definition (*Relation d'un Voyage*, &c., &c., p. 208), we are to understand the precise determination of the different luxations to which a joint is liable, the mechanism by which produced, the new relations formed by the parts displaced, and finally, the characteristic signs of each luxation, we have no hesitation in asserting that the great work of M. Malgaigne stands unrivaled.

We regret that the peculiar circumstances in which we have been placed, since we proposed to ourselves the task of analyzing this work, have rendered it impossible for us to do anything like justice to the subject. For years to come it must be *the* book of reference for every practical surgeon, as well as of the student desirous of obtaining an accurate knowledge of the "doctrine" of luxations. G. C. B.

Art. VII.—*Annual Report of the City Inspector of the City of New York for the year* 1854. New York, 1855, 8vo. pp. 248.

This voluminous document has gradually attained its present size from a thin serial ten years since. Although, as the City Inspector says, the statute and ordinance by which he is "directed to report, annually, to the Common Council the business of his office, do not require so thorough and varied an elaboration of its proceedings; yet those enactments hardly had in view the great benefit to be derived from the collection of complete statistics. They aimed simply to the record of such general matters as pertained to the identification of deceased parties, and not to the progress of scientific research, the advancement and success of which so much depend upon the faithful collection and publication of every item of information having a bearing upon useful knowledge." The vital statistics of so large a city as New York, can scarcely be too highly valued. It is not our intention to thoroughly review the report, at this time; but to merely attempt to call attention to such parts as will best show its value. Every *city* physician will be able to peruse it, and we suppose that those out of it could obtain a copy, by offering a return, in kind, of the statistics of his own county. For the benefit of our readers, who are unacquainted with the business of the department, we will attempt to give some general idea of its records, which comprise many particulars of the births, marriages, and deaths, in a city numbering, by a complicated census, at least 625,000, together with the sanitary survey and registration of the condition of every house and lot. The records of the births and marriages are not perfect, on account of the failure of, perhaps, one half of those who should do so, to report; they are, however, valuable, as they give us, mostly, the correct proportion of sexes, colors, ages, and conditions. But the necrological record is as nearly complete as it is possible to have it, from the fact that every corpse must be interred, and that no burial can be made, and no human cadaver be removed from the city, without a permit from the City Inspector; which is given only upon a proper certification of the causes of death. The value of these records is also enhanced from the knowledge of the age, sex, color, condition, occupation, nativity, term of residence, etc., of each, given by the returns; and from these latter items the long series of tables, or a magazine of figures, as it is fitly called, has been compiled.

The argument frequently urged against conclusions from our mortuary statistics, of the fact that a large number of the signers of certificates are unprincipled, or careless, and ignorant of pathology, is frivolous and will not invalidate any general conclusions; but only the minor deductions which might be made from the small numbers of some comparatively rare diseases: the greater part, however, are drawn from the numbers dying from all the diseases of particular systems or classes; thus, although phthisis may be called chronic bronchitis, or bronchitis, croup, yet all will be correctly included under the order respiratory; in other words, the mistakes made by those giving certificates of death affect mostly the particular genera, not the orders or classes of disease; and as those of certain orders have mostly the same causes, the inferences will hence be generally correct.

Again, according to the report, as 4,352 died during the year, in the hospitals, or institutions, all of which have capable physicians, and as the number of deaths from disease was 25,325, almost one-fifth are thus proved accurate; to which, if we annex the coroner's certificates of disease, amounting to a few hundreds, and the large number given by dispensary physicians, a well-qualified body, who treat over one-third of the cases of sickness of the city, we can then aver, that about one-half are treated by competent physicians connected with the various eleemosynary and reformatory institutions; and in addition, we may form a reasonable estimate that four-fifths of all the other practitioners of medicine report correctly; thus the correct returns may be considered to embrace nine-tenths of the whole number, and the general grouping of the remaining tenth will not lead us far astray. Besides which, the known constant relation of our prevalent diseases to their returns, here and elsewhere, of death, as well as the general uniformity observed, even in reports of unscientific names, such as atrophy, debility, or marasmus, help to show that the greater part of the returns of death are made understandingly.

According to the report before us, the total number of deaths for 1854 was 28,568, of which 2,197 were either still-born, or died from malformation, or premature birth; and 1,043 from other causes than diseases, such as injuries, suicides, etc. The total number of males was 15,265, females 13,303, adults 10,682, children 17,886, of the African race 701.

The display of the different particulars of the above, as to diseases, ages, sexes, nativities, occupations, conditions, places of death, etc., occupies one hundred and eighty closely-printed octavo pages of figures, in addition to which the tables of births, marriages, and meteorology, for the year, embrace thirty-two more. The most interesting tables in the report are, 1st, those showing the nativities of all the deceased; 2d, those of the mortality in each public institution in each month of the year, showing the numbers, sexes, ages, nativities, color, and reported diseases; 3d, those of the external causes of death, giving the month of occurrence, and all the various items mentioned above; 4th, statements of the monthly mortality, showing, in detail, the various causes, sexes, ages, nativities, and colors. Thus, in the month of March, the most fatal to phthisis, 297 deaths from it occurred, of which 165 were males, 132 females, 102 foreign males, 81 females; 6 colored males, 8 females, 57 native males, 42 females; and it also shows, on the same pages, how many were under 1 year of age, between 1 and 2, 2 and 5, 5 and 10, 10 and 15, and so on; 6th, annual recapitulation by classes and orders, the first relating to the causes of disease, and the second to functional invasion, exhibiting, also, under the head of each genus of disease, the numbers, sexes, nativities, colors, public institutions, adults, and children, with a summary representing the totals in the various classes and orders, both distinct and combined; 7th, ward mortality of the city, comparison of which, with the condition of the locality, will be found instructive; 8th, the diseases, occupations, and nativities of the male adults who died in 1854. (Note.—We would suggest, for another year, the addition of a table, having the same subject as the 6th, mentioned above; but showing the number of deaths in each class and order, in each month.)

The number dying in 1854 was nearly 26 per cent. more than in 1853; a large increase owing to the prevalence of epidemic cholera and its kindred diseases, which existed four or five months in several parts of the city. The first case, in May, was reported by a physician of the New York Dispensary; it occurred in a filthy locality in Cherry-street, and the second by another of the Eastern; this case was in a poor tenant house in Division-street. In comparing the reports of 1854, and of the year of the preceding terrible epidemic, 1849, we find that cholera had nearly the same proclivities and history in both as regards the localities in which it prevailed, and the class of its victims; but about 29 per cent. of its deaths being native in '49, and 23 per cent in '54. To quote from the report of '49, "the inhabitants of those sections where the disease mostly prevailed were among the most miserably poor and destitute, and we know that its victims were the indigent, who previously existed in a state of semi-starvation, rags, and want;" in the language of Shakspeare, those

> "Whose houseless heads and unfed sides
> Loop'd and window'd raggedness, defend
> But poorly 'gainst seasons such as these."

In view of the above, it is gratifying to know that true benevolence could mostly prevent the ravages of this disease.

The proportion of deaths to population in 1840 was about two and a half per cent.; in 1845, two and two thirds; in 1849, four and one third; and in 1854, four and a half per cent., showing a steady increase and a larger ratio of mortality than most other cities: both are well-accounted for, by the prevalence of cholera, and the greater influx of immigration to this port. The total number from Europe, seeking new homes in the United States, by way of this city, in the six years ending with 1846, was 337,780; but the most astonishing increase, and one unparalleled in the annals of any country, began in 1847, since which time, eight years, the immigration has overrun two millions.

The excess of male and infant mortality is shown, by a table, to have been regular for many years; that subjoined is a summary of it.

Excess of mortality of	1849	1850	1853	1854	last 8 y'rs
male over female	1157	1338	1758	1962	6215
" " adult " " do.	117	317	822	810	2066
" " children " " do.	1040	1021	936	1152	4149
" " " adults.	1915	4156	6454	7204	19729

This table also shows, that in the seasons of a severe epidemic, like cholera in '49 and '54, the disproportion of deaths between the sexes, and adults and children, is reduced; and we may, also, infer from it, that our climate, at other times, is peculiarly unfavorable to infant life.

The Report says that the "greater exposure of male adults is usually assigned as a reason for their excess of deaths; but that of male children has not yet received a solution that is deemed satisfactory." It might be added, however, that it can be proved that the greater number of males born of the human race, as well as their greater exposure to accidents; and the causes of disease, deducting the still-born, of which there are more males than females, on account of their superior size, fully accounts for this excess; thus, for example, the proportionate excess of male children, born in 1853 and '54, was over eight per cent., and the same proportion of drowned male children was about ninety per cent.

The excess of deaths of male children, from external causes, was 400 (see table); the excess of deaths of male children from disease alone was 752, and, according to the ratio of excess of male births, the natural excess of male deaths from the same causes of disease should have been 592. This argument is conclusive; indeed, it seems to prove too much, and we may be compelled to admit that the general causes of disease affect female children more severely, than the other sex.

Continuing the same train of reasoning, we find that the number of deaths of boys, from diseases produced more by out-door than in-door exposure to their causes, such as inflammations, etc., was 4,100; girls from the same causes, 3,380, boys' excess 720; same etc. from causes operating more in-door, such as fevers, etc., boys 648; girls 740; girls' excess here 90; excess of boys' deaths from all these causes 630. 6,526 children died from other causes of disease, supposed to act as much within as without dwellings; the excess of male deaths amongst these, at the ratio of male births, should be 250, whereas, it was but 126.

Pertussis seems to have been more fatal to girls than boys, of these 150 died, and of those 189. Some other causes, also, departing from the general rule, seem to aim the most fatal shafts at one sex in the morning of life, and during and past its meridian, at the other. See table.

	Boys.	Girls.	Men.	Women.
Gastritis	19	14	24	45
Enteritis	112	82	73	98
Marasmus	871	754	41	42
Convulsions . . .	1137	993	23	30

And one large order, the digestive in the class of sporadic diseases, shows the same anomaly.

Boys.	Girls.	Men.	Women.
1243	1089	432	468

The most fatally visited months of the past year were the same as in the seven, and probably most previous years, viz.: July and August; the excessive heat of those months will always account for it, however. September was the next most fatal in 1852, '53 and '54. Comparison of the weather and mortality, for the previous nine years, shows that when September was unusually cool, December was the third month in fatality, and when of a mean high temperature, it was then the third, and December the fourth in order.

The healthiest months, as we gather from reports of eight years, both by comparison of the mortality and of the meteorological registers, were the vernal and autumnal, viz.: the latter half of April, May, earlier half of June, latter half of September, and the whole of October, or, in other words, the latter part of our so-called spring months, and the middle of the autumn, are the seasons of the year when there are the fewest diseases caused by extremes of heat or cold, or of dryness or moisture, either in or out of doors; the most fatal months are July, August, and September, the extreme heat, and the excessive moisture in basements, and ill-ventilated apartments, then, always act as direct causes of disease. The winter months, November, December, January

February, and March, are the next as regards fatality, owing to the extreme cold out of doors, and the dryness in doors. The table appended is an approximation towards showing the monthly average of the three seasons mentioned above; it is proper to note that the mortality of November is usually disproportionately small, because of the previous hot months having decimated the ranks of the infant and debilitated population. Summer season, average per month (with cholera deducted) 2084, or about ten and one-fourth per cent.; Winter 1552, or seven and three-fourths per cent.; Vernal or Autumnal 1486, or seven and three-eights per cent.; the mean monthly mortality for nine years has been 1677.

We are informed, page 207, "that in an aggregate mortality, during the past eight years of 167,353, that of the children exceeds the adults 32,413, or about forty-eight per cent. The annual average of adults is 8,434; of children 12,485." (Note.—It is proper to state that twenty is the dividing line between children and adults.) The disproportion between infant and adult mortality has been increasing for several years, and is well calculated to excite the alarm of some; can we refer such a hecatomb of human offspring to natural causes! Shall we dare to say how much, want, crime, or malpractice are chargeable with. One important element must always be considered in attempting to account for this increase, viz.: the flood of immigration for many years, which has left its worst detritus to refill our filthiest localities with a prolific population, more ignorant and vicious than their predecessors; at the same time a large portion of our most healthy children have been removed to the adjacent cities and counties. It is well-known that with the light of advancing medical science, many more children of the classes who live neatly and comfortably, grow up to view the sun of puberty. This excess of infant mortality is not as great in the fifteenth, and other wards occupied by the wealthier classes of society. The offspring of those in this country but two or three years, can hardly be considered acclimated, and we know that more than two thirds of the infant names are either of the languages of Continental Europe or of Ireland.

By a review of the reports for the past eight years, we are enabled to give the per centage of deaths to ages. Under one year, thirty-three per cent; from one to two years, thirteen per cent.; from two to five, ten per cent.; five to ten, four per cent.; ten to fifteen, one and a half per cent.; fifteen to twenty, two and a half per cent.; children under twenty, sixty-four per cent.; from twenty to thirty, ten per cent.; thirty to forty, nine and a half per cent.; forty to fifty, six and a half per cent.; fifty to sixty, four and one-fourth per cent.; sixty to seventy, three per cent.; seventy and upward, one and three-fourths per cent.

We shall merely glance at the remaining tables in order to call attention to their most interesting features. The tenth shows the particulars of the diseases of 1854, arranged scientifically into classes, orders, and genera, as in natural history; the two classes are, 1st, zymotic; 2nd, sporadic; and the different genera of diseases are assigned to the various orders in each class, according to functional affection; thus, pleurisy may be found in class two, order five, (respiratory.) Of the first class, which includes diseases, mostly contagious and endemic, or epidemic, there were 10,100 deaths, about thirty-five and three-eighths per cent.; in the previous year of cholera (1849) about forty-four and one-fourth per cent.; in the previous year of typhus (1847) about thirty per cent; in the healthy years 1848, '50, '51, '52, and '53, only twenty-five and a half per cent.

Therefore, the public health may be considered the best, when and where the zymotic diseases prevail the least.

The meteorological register, which has been embodied in this report for eight years, contains, this year, a new feature, the hygrometrical element. The table showing the diseases, etc., in each public institution, is very valuable; amongst other desiderata, it acquaints us, at a glance, with the knowledge of the class of patients treated in each.

The feature of the report, destined to be the most valuable, in our opinion, is the table of diseases and occupations, which we may hereafter review, when the official census of the trades, etc., can be obtained.

We trust that enough has been said to induce the profession to study the report; the few grammatical or typographical errors will not mar any deductions; and we conclude with the hope that all physicians will hereafter, for their own good, for the perfecting of the statistics of this department of city affairs, in which we all should take pride, and for the benefit of medical science, unite in reporting all the births with punctuality, as well as every other item sought for in publications of this kind. J. P. L.

BIBLIOGRAPHICAL NOTICES.

ART. VIII.—*History of the American Medical Association, from its Organization, up to January,* 1855. By N. S. DAVIS, M.D., Professor of Principles and Practice of Medicine and Clinical Medicine, in Rush Medical College, etc., etc. To which is appended Biographical Notices, with Portraits of the Presidents of the Association, and of the Author. Edited by S. W. BUTLER, M.D. Philadelphia: Lippencott, Grambo & Co., 1855, 8vo., pp. 191.

SELDOM has it been our pleasure to examine an American publication so well adapted for the purpose of a "Medical Annual" as the one whose title heads this notice. The intrinsic merit of the subject matter, and the general truthfulness of the compilation, will, of a certainty, attract, towards the publication, a goodly number of readers. On the bearings of the special principles, as well as means of *medical reform* therein advocated, there is, of necessity, a wide difference of opinion in the professional mind. Any attempt to adjust this difference, when presented in the light of calm inquiry, should command the attention of every one who claims respect for medical improvement.

In the perusal of this interesting volume, several blemishes of orthography and of historical facts have struck us as of doubtful accuracy. That recorded on p. 20, in the following language, may be cited as one: "The first movement, of which we have any record, which contemplated a convention of delegates, not only from all the medical colleges, but, also, from the regularly organized medical societies throughout the whole county, was made in the Medical Society of the State of New York, at its annual session, in February, 1839." As a matter of history, the following fact is on record: The official report of the *Proceedings of the New Hampshire Medical Society*, at its forty-seventh anniversary meeting, held in Concord, N. H., on the 5th and 6th of June, 1838, is published in the *Boston Medical and Surgical Journal* (for Aug. 15th, 1838), vol. 19, p. 30. Among other matters, that report states: "That the subject of a National Medical Convention was taken up, and, after some discussion, was referred to a select committee. The committee reported favorably, and, thereupon, the Society voted to recommend an Annual National Convention, to consist of delegates from the various medical schools and societies in the Union; that the first convention be proposed to be holden A.D. 1840, and that the Secretary send a notice of this vote to the *Boston Medical* *and Surgical Journal*, and to the *American Journal of Medical Sciences.*"

The typographical beauty of the work, and the artistic finish of the illustrations, enhances greatly its attractions, and we hesitate not to say that our impressions will not be realized if the volume before us does not receive, at the hands of the profession, an amount of patronage sufficient to compensate authors and publishers for the labor bestowed upon its production.

ART. IX.—*The Pathology and Treatment of Leucorrhœa.* By W. TYLER SMITH, M.D., Lecturer on Midwifery, etc. Philadelphia: Blanchard & Lea, 1855, pp. 199.

A Practical Treatise on the Diseases Peculiar to Women, Illustrated by Cases derived from Hospital and Private Practice. By SAMUEL ASHWELL, M.D., Obstetric Physician to Guy's Hospital, etc. Third American, from the third and Revised London Edition. Philadelphia: Blanchard & Lea, 1855, pp. 528.

THE outline of Dr. Smith's work appeared in the *Medico-Chirurgical Transactions* (vol. xxxv). The novelty and apparent accuracy of the investigations, and the important bearing which they had upon the knowledge and treatment of leucorrhœal diseases, attracted very great attention. In the present volume we have these investigations reproduced and greatly extended, with deductions of great practical interest. The following heads of chapters will give a general idea of the subjects discussed:—Minute Anatomy of the Vagina, Os, and Cervix Uteri; Glandular Structures of Canal and Cervix Uteri; Secretions of Vagina, Os, and Cervix and Cervical Canal of Uterus in Health; Leucorrhœa in its different forms, its Sequelæ, its relations to Secondary Syphilis, to Gonorrhœa, to Disordered Menstruation, to Sterility and Abortion, its Constitutional and Local Causes and Treatment. As this interesting monograph is now placed within the reach of every American practitioner, we need not allude to it further than recommend it to their notice, as one of the most important and original medical publications that has recently appeared.

The work of Dr. Ashwell is a new and revised edition of his standard work on the diseases of females. It has always been a popular work with the profession of this country, and the value of the present edition has been greatly enhanced by the careful revision of its author.

Art. X.—*The Diseases of the Heart and Aorta.* By William Stokes, Regius Professor of Physic, in the University of Dublin, etc. Philadelphia: Lindsay & Blakiston, 1855, pp. 710.

This volume, containing the experience, investigations, and deductions of one of the most eminent practitioners of the age, is now brought, by republication, within the reach of the American physician. No work has met with more general and deserved approbation at home and abroad than this elaborate treatise. The profession naturally looked to Dr. Stokes for the most complete work on this subject, and we venture to say that few are disappointed. We most cordially recommend this volume to the practitioner, as one which he will find indispensable to a correct understanding of the diseases of the heart.

Art. XI.—*The Mineral and Thermal Springs of the United States and Canada.* By John Bell, M.D., Author of "Baths and Mineral Waters," etc., etc. Philadelphia: Parry and McMillan, 1855, 12mo, pp. 394.

To the valetudinarian, and likewise to the traveler in the pursuit of pleasure, this little volume will prove both useful and instructive. It fills a hiatus long since felt to exist in the literature of the day. The work contains notices, more or less complete, of one hundred and thirty springs and groups of springs in the United States. We are pleased to see that, in a professional point of view, it may be regarded as an earnest of the author's intentions, or as an installment of his larger work, in which the scientific history of springs will be fully set forth.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

SURGERY.

On Circular Cauterization of the Base of Hemorrhoidal Tumors complicated with Prolapse of the Mucous Membrane of the Rectum. By Dr. Alphonse Amussat, Jun.

[*Concluded from Page* 288.]

In order to give a still more complete and exact idea of the affection to which I have endeavored to call the attention of the profession, I have added the annexed drawing, taken from nature, of hemorrhoidal tumors, with prolapse of the mucous membrane of the rectum, on which I shall shortly operate by the process I have described. The patient is in the habit of supporting these tumors with a spring bandage, furnished with a ball of gum elastic. The constant pressure of the ball upon the anus has produced a dilatation of the sphincter, which allows the tumors to come down when they are not supported.*

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* We have, however, seen many cases of hemorrhoidal tumors, and of prolapse of the mucous membrane of the rectum, in which the greatest benefit has been derived from the support given by an anal truss, manufactured by Mr. Duff, of Molesworth-street, in this city. This instrument consists of a steel spring, well padded and covered with leather, passing round the hips, and furnished in the part which rests on the sacrum with a little cushion. To its centre posteriorly is screwed a steel plate, perforated with three or four holes over one another for the admission of the screw; attached to this plate, by a joint admitting of lateral flexion, is a rod of steel, also covered with leather, descending vertically, and terminating in a rounded cone of ebony, and so curved that the latter shall rest against the anus. The length to which this rod descends can be increased or diminished by screwing the plate of steel, above mentioned, at one or other of the holes, to the horizontal spring. As an illustration of the effect of this instrument, we may mention the case of a medical man, then aged 38, who had for five or six years suffered from a gradually increasing prolapse of the mucous membrane of the rectum which had in the commencement of 1851 attained such a hight that he was unable to walk more than a quarter of a mile without the membrane protruding and becoming painfully strangulated. This was attended with a copious discharge of mucus, which rendered his state uncomfortable in the extreme. Almost every action of the bowels was accompanied by copious hemorrhage. A loss of both red, and what Sir Henry Marsh has so well termed white, blood was thus taking place, which must soon have undermined his health. An eminent surgeon gave his opinion that operation was indispensable. A truss was, however, procured, and, having been properly adjusted, was worn with the effect of wholly preventing the occurrence of the prolapse. As a consequence, the discharge of mucus and the hemorrhages have altogether ceased, and all annoyance has been entirely removed. The tendency

I might easily have brought forward a greater number of facts, but those I have recounted will suffice, I think, to prove the simplicity and the safety of the operation I have described. I may add, that MM. Hippolyte Larrey, Martin (Saint Ange), of Paris; Dr. Mascarel, of

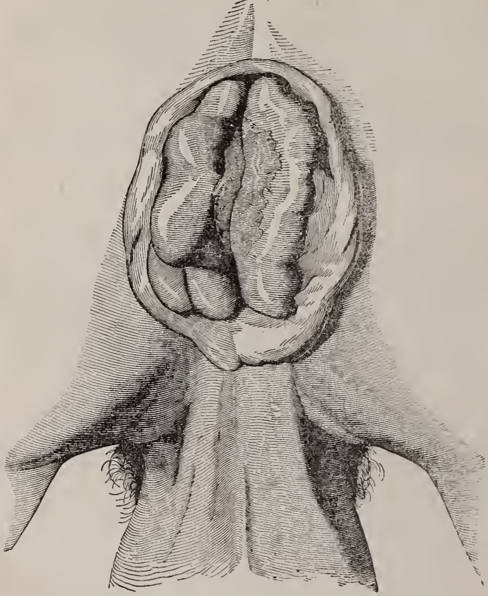

Fig. 8.

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of the use of the instrument is, moreover, by preventing the descent of the parts, to promote their contraction, and thus, if the bowels can be duly regulated without the irritating effects of medicine, to lead to a real cure. It is better to use the instrument only at such times as the patient is likely to be actively engaged. Due attention should, of course, at the same time. be paid to the avoidance of much standing, sitting on hard seats, straining at stool, or lengthened attempts at defecation. We have never seen the dilatation of the sphincter above alluded to produced by the use of this instrument, and we think it will be found that there are few cases of hemorrhoidal tumors, or of prolapse of the rectum, in which the necessity for operation may not be indefinitely postponed by it, and where, under favorable circumstances, even a cure may not eventually be reasonably looked for.—Trans.]

Châtelleraut; MM. Maher, J. Roux, Laurencin, Professors in the Schools of the Imperial Marine, have kindly communicated cases of patients successfully operated on according to my plan. Lastly, MM. Barthélemy and Jobert,* who formerly gave an exclusive preference to the actual cautery, have now abandoned it, and employ, instead, the caustic potash with lime. As the details I have given in describing my operation appear to me sufficient to enable the reader fully to understand its several stages, and with ease to put them in practice, I shall not return to that part of my subject; but I think it useful to dwell for a little on its sequelæ, and the consequences which may result from it, for the rule of conduct I have adopted is the result of an experience based on the numerous facts I have observed during more than ten years.

The two or three minutes which I judge necessary for the cauterization having elapsed, the forceps is removed, care being taken that the caustic it contains shall not touch the neighboring parts, and the injection of cold water, which has not been interrupted during the operation, is continued. The jets of liquid should be directed chiefly to the linear depressions formed by the instrument, in which the caustic is situated, in order to remove particles which may not have chemically combined with the tissues. It is at this time especially that the patient feels the cauterization, which is no longer masked by the pressure of the forceps, and the cold fluid pouring on the tissues has, in addition to the effect just mentioned, that of acting as a local anæsthetic. When the parts have been washed sufficiently to have removed all the caustic, the tumors are carefully smeared with olive oil, and returned into the rectum. The oil both serves to facilitate the reduction, and, to a certain degree, protects the tissues by combining chemically with the alkalies, should any still remain.

Small quantities of cold water are also thrown into the rectum, and allay the pain, and afterwards the patient is placed in a cold sitz-bath, or, better, in a full-sized bath, at an agreeable temperature, which will, of course, vary according to the time of the year. In this he generally remains about an hour, being guided, in this respect, by his own sensations.

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* M. Jobert de Lamballe has recently published a new mode of cauterizing hemorrhoidal tumors *en masse* by means of caustic potash with lime. This surgeon seizes the tumors with a double arch of silver, which forms a sort of capsule, and covers them with Vienna paste, which he leaves applied for some minutes. The only patient on whom this operation has been performed had hemorrhoids of ordinary size, and two successive applications of the paste were necessary to destroy them. This mode of operation cannot be compared with the circular cauterization of the base of the hemorrhoids I have described. By my proceeding, in fact, the caustic is applied on a surface of but very limited extent, and the pressure of the forceps, combined with the continual irrigation with cold water, so moderates the pain of the operation that it is only exceptionally I have recourse to anæsthetic agents. Moreover, the pain which follows the operation is much less than in M. Jobert's proceeding, the cauterized surface being less extensive. His plan can only be compared with the mode I formerly pursued with a stick of Filhos' caustic. The latter proceeding possesses the advantage of not requiring a special instrument, and besides, the solid caustic acting more quickly than the paste, the operation lasts a shorter time, and I have never been obliged to repeat the application.

Generally speaking, on coming out of the bath, the pain, which has gradually diminished, is very slight; occasionally, however, in very nervous persons, or when the caustic has not been completely removed from the tissues, it is still severe. In this case we advise the patients to return to bed, and to place themselves in a position similar to that they observed during the operation, while a continued douche of water, which in winter should be tepid, in summer cold, is directed against the anal region. I have known some to find it more convenient to substitute for the douche, continued applications of lint dipped in cold, sometimes even iced water, and very frequently renewed. This latter means, though undoubtedly efficacious, should be employed with care, so as to avoid the reaction which is apt to set in when it is suspended or left off. Other patients remain all day in the sitz-bath, the temperature being kept up by the addition, from time to time, of warm water. I once attended, with my father and Dr. Pouget, a person who, after the cauterization of two tumors, remained in a sitz-bath almost constantly for a week; he said he was very well in it, and not the slightest bad effect resulted from this protracted use of it.

Most frequently two or three sitz-baths during the day, small continued douches, with poultices on the anal region, in the intervals, constitute the local treatment.

This plan should be persevered in until the wound is almost completely cicatrized, especially if the least sign of inflammation should be observed.

The only nourishment I allow is strong beef tea, and I recommend the patient to keep his bed for two reasons: first, because, by so doing, he bears the restricted diet better; and secondly, because the bowels are then less liable to act. Those who will not submit to this plan are obliged at once to take a more substantial diet, the result of which is stools, which are more painful in proportion as they occur nearer the time of the separation of the eschar.

Frequently a dysuria comes on, which lasts some hours, and subsides spontaneously, for I do not remember having had recourse to catheterism in a single instance. There is generally swelling, sometimes partial, sometimes general, of the areolar tissue about the anus. The patients complain of it a little, and generally think it is the hemorrhoids which have come down. I employ only the local means I have mentioned, and if the patients are very irritable, I have the poultices sprinkled with a little oil and laudanum. I sometimes give on the first night a composing draught with syrup of poppies. The state of the patients is generally so satisfactory on the following days, that they complain only of the diet and rest which are imposed upon them.

At the end of three, four, six, eight, or twelve days, portions of sloughs will be seen on the poultices, indicating that the mortified tumors are thrown off, of which the characteristic odor they diffuse likewise gives notice. The broth diet is continued as long as the patient does not complain too much of it, and in this way the work of elimination and reparation goes on very well, as there is nothing to interfere with it. I endeavor to postpone the first motion as long as possible, without, however, annoying the patient too much. When he feels a repeated desire to go to stool, which generally occurs at the end of six or eight days, I direct two or three ounces of lard melted in a water-bath, or a lavement of decoction of marsh-mallow, to be thrown into the rectum. The introduction of the tube should be managed with the greatest care, so as not to irritate or injure the wound. This duty should be intrusted to an assistant or an intelligent nurse.

The first stool is always rather painful, and the patient passes a few drops of blood; in two of my patients two or three ounces were lost without any bad effect except some increase of weakness, which I met by improving the diet. If the exclusive use of beef tea does not become too repugnant to the patient, which generally takes place, I induce him to continue it for some days, being guided by the time at which the eschars fall off and the probable state of the suppurating surface, the extremity of which can generally be seen at the anal orifice. It is unnecessary to observe, that I discontinue the baths as soon as the pain about the anus has ceased, as they would, along with the restricted diet, lower the patient too much. My object in continuing the exclusive use of the broth is to postpone the second motion, and to render it as small as possible. If, however, this diet does not sufficiently support the strength, or if disgust comes on, I substitute fresh eggs, gravy, and a little bread or pastry, gradually increasing their quantity. The second stool usually takes place from the twelfth to the fifteenth day, and ought to be preceded by the precautions I have detailed in reference to the first. The patient now begins to resume his ordinary mode of life; a great many go out, and some return to their occupations, taking care, however, to use an occasional sitz-bath, to foment the anus with tepid water several times a day, and particularly after having been at stool.

Such are the phenomena I have observed, and the measures I advise, after the circular cauterization of the base of hemorrhoidal tumors, whether simple, or complicated with prolapse of the neighboring rectal mucous membrane; and from what I have stated, it will easily be inferred that not only have I never lost a patient in consequence of the operation, but I have never had reason to be uneasy about my patients. I may add, that in no case have I observed the slightest symptom of pyemia to arise.

It would, perhaps, now be well to compare this new mode of treatment with those in ordinary use—the ligature and excision: but to draw this parallel would lead me beyond the limits of the present essay; it may suffice to remark, that I have never observed the nervous or phlebitic attacks to result from the new plan which have been attributed to the ligature, nor have I ever witnessed the hæmorrhages and purulent absorptions to which excision occasionally gives rise. In a future essay I shall examine, comparatively, the other modes of cauterization employed in the treatment of hæmorrhoidal affections.

It will, no doubt, have been remarked, that the five cases I have quoted are those of patients advanced in life; the remaining facts which have come under my observation confirm the opinion generally received in reference to this affection, namely, that it is more common in those who have passed forty years than in younger persons. It may be fairly asked if it is advisable to cauterize hæmorrhoidal tumors in old people, and especially when, being of long standing, they have become habitual and constitutional. As I have already said, I never take away all the tumors, confining the operation to those which give most annoyance; and although it has been objected that, in acting thus, we do not completely remove the affection, and that the tumors which are left may subsequently be developed and oblige the patient to undergo the operation anew, still, as this reproduction has hitherto been very rare, and as my plan has always been attended with fortunate results, I think it right to persevere in the same line of conduct. In a word, I am of opinion that we ought only to remove the tumors which are really prejudicial to health.

Among the advantages which result from the operation I shall point out, first, the cessation of that constant and great irritation caused by the protrusion and perpetual friction of the tumors against one another. This friction quickly removes the epithelium from the surfaces which are in contact; the patients feel an incessant smarting, which enervates them; a weakening, muco-purulent discharge is set up at a period of life when losses suffered by the system are repaired but slowly and with difficulty. Moreover, the sufferers are debarred from the little exercise their lower limbs would still allow them, by the fear of its producing an aggravation of their state. It is rarely, too, that the phenomena of digestion are not more or less disturbed; the advantages to be derived from terminating such a state of things will be at once apparent.

Double care should, however, be taken after the operation to guard against metastatic engorgement of the organs of respiration or of the liver; of such the physician should be particularly watchful, especially at first. I may add, that spring should, if possible, be chosen for the performance of these operations, so as to have the fine season for the period of transition.

It was my original intention to have closed my essay here, having, I think, sufficiently demonstrated the proposition I had advanced; but on reviewing the various cases of voluminous and complicated hemorrhoidal tumors I had observed, and reflecting on the comparisons which might be established between the affection I have been speaking of, and prolapse of the mucous membrane of the rectum, whether simple or complicated with hemorrhoidal tumors, that is to say, on the cases in which the complication becomes, by its development, the principal affection, as well as on the difficulties which sometimes exist in clearly diagnosing between these two pathological states; I asked myself if an operation which succeeds so completely in one case might not be applicable to the other The study of the etiology and ordinary progress of prolapse of the mucous membrane of the rectum shows that, most frequently commencing as a complication of the hæmorrhoidal affection, it may at length become the prominent ailment, in consequence of its development and of the derangements it produces; and it is often true that, while the vascular element little exceeds its ordinary limits, the prolapse alone attracts the entire attention of the surgeon.

Is not, in both cases, cauterization with a porte-caustique forceps applicable to the mucous tumor protruding from the anus, and may it not be regarded as the logical corollary of the treatment we employ in the cure of hæmorrhoids?

Ligature, excision, and cauterization, have been already employed in the treatment of prolapse of the mucous membrane of the rectum. As in hæmorrhoids, ligature has given rise to fatal nervous symptoms, excision to severe hæmorrhages; accordingly, these two methods appear to have been abandoned in both cases.

The actual cautery employed by the ancients, especially advocated by Marcus Aurelius Severinus, and described by Sabatier, who proposed to trace burnt lines upon the tumor, by means of an iron wire brought to a white heat, has been successfully practiced by Dr. Kluiskens of Ghent, and by several French surgeons.

It appears to me, however, that this process, which I believe to be preferable to the former two, may with advantage be replaced by the use of caustics.

We find in the records of science instances of complete gangrene of the prolapsed part, caused by strangulation produced by the sphincter, with cure. It would, therefore, at once occur to us to seize the base of the prolapse with a strong porte-caustique forceps, so as to induce immediate mortification, as in the case of hæmorrhoids, in imitation of what is sometimes done by nature. By acting thus we should probably do more than is necessary, and expose ourselves to the risk of causing a subsequent contraction of the anal orifice.

I think it would be sufficient and preferable, in such a case, to follow the plan I adopt with voluminous hæmorrhoidal tumors, namely, to destroy, by the same process of cauterization, the half or two-thirds of the mucous tumor, so as not to have a continuous linear cicatrix.

Such were the deductions I thought might strictly be drawn from the facts I have quoted, when, on the 25th of last August, M.X., a physician in the environs of Blois, who was acquainted with the former part of this essay, came to consult me about his wife, whose case I subjoin, and who was affected with a prolapse of the mucous membrane of the rectum. This very interesting case gives to the proposition I have announced the sanction of an experience, recent indeed, but which I hope to establish in a positive manner when time and facts shall have enabled me to make in it such modifications as may hereafter appear to be necessary.

[The case alluded to was one of voluminous prolapse of the mucous membrane of the lower extremity of the rectum, treated by cauterizing the two lateral portions of the tumor with a T-shaped forceps armed with Filhos' caustic; and resulting in cure. The patient, Madame X., aged 63, had always suffered from obstinate constipation; in her youth she was often, when she had not recourse to lavements, ten, twelve, and sometimes fifteen days without a motion. She had also long and alarming fainting fits at the times when the bowels felt as if about to act, and she made violent and prolonged efforts to expel the fæcal matters.

At the age of 54 the patient perceived that the mucous membrane of the rectum protruded externally, but this was not constant, taking place only at intervals of two, three, or four months, and continuing for not more than three or four days at a time. It was preceded by a feeling of general uneasiness, headache, and a sensation of weight and heat in the rectum, and was followed by a tolerably abundant hæmorrhage at stool, when all returned to its normal state.

Two years later, without the hæmorrhage being more frequent, the prolapse, from having been intermittent, became constant when the patient was up, and exhibited itself from the beginning under the form of four non-pediculated tumors, one superior, one inferior or perineal, and two lateral; the superior and inferior being smaller than the two lateral ones. This prolapse became, in time, more voluminous and more inconvenient, in consequence of the feeling of weight and dragging it occasioned in the uterus and its appendages. The patient, being no longer able to walk a step without putting her hand behind to raise the tumor, except during some hours after rising, when she had the evening before taken lavements, decided on submitting to a surgical operation.]

The accompanying drawing, taken a little before the operation, gives an accurate idea of her malady. It will be seen that there existed an undefined, unfurrowed, rosaceous, mucous tumor, as in the hæmorrhoidal affection, rendering it impossible for any one to be for a moment deceived as to the nature of the ailment.

A lavement having been administered, and efforts at defecation having been made, an examination was instituted. On exploring the vagina with the index finger, I ascertained that the cervix uteri was united posteriorly by a cicatrix such as my father obtains by cauterization in cases of retroversion and retroflexion. Bearing in mind the analogy existing between this affection and that which is the subject of this essay, I proposed to cauterize a portion of the mucous tumor, as if we had to do with voluminous hæmorrhoidal swellings. To this M. X. agreed.

On the 29th August, Madame X. having in succession taken and passed two lavements, using as violent efforts as possible, was placed on a bed furnished with a folded sheet and oilcloth, and in the position usually adopted in operating for hæmorrhoids.

The anus then presented the appearance represented in the figure; considering the lateral portions A A as two large hæmorrhoidal tumors I seized each at its base with a strong T-shaped porte-caustique forceps with protecting plates, and when I had placed the instruments as high as possible, I uncovered the caustic, and strongly tightened the two screws. But as the fissures between the four portions of the tumor were very shallow, I was obliged to add to one of the extremities of each forceps a forceps with porte-caustique rods, charged with paste of potash with lime, so as to make, artificially, furrows which did not already exist.

Everything having been thus arranged, I caused a current of iced

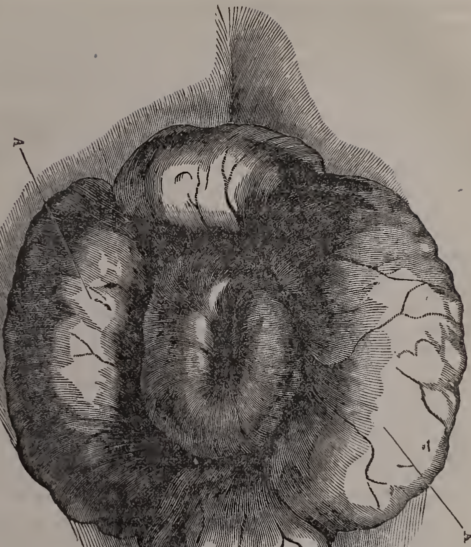

Fig. 9.

water to be thrown on the anal region with two large Eguisier's irrigators, during the ten minutes that the instruments remained applied. Under the influence of the very strong pressure exercised by the forceps, and of the current of iced water, the patient, a very nervous person, bore the operation so well, that she did not require the use of chloroform, which we had before agreed to exhibit.

The operation being over, I removed successively the small forceps, then the T-shaped forceps, and continued the douches of iced water for about a quarter of an hour, taking care to direct the jet on the points where the caustic had touched.

Having smeared the entire mucous surface with olive oil, I returned it by means of a regular taxis, and the patient was placed in a cool sitz-bath, a compress of linen having been fixed on the anal region so as to prevent the protrusion of the mucous tumor. The pain she had experienced, after the operation, was allayed, and soon became very tolerable. In the evening there was a little fever and complete retention of urine, which rendered catheterism necessary. The retention continued until the 2nd of September, when it ceased. On the 1st of September the patient voided per annum a blackish liquid; this kind of discharge continued for some days. On the 6th, a long portion of mortified areolar tissue was passed. On the 30th, a month after the operation, an examination was made; nothing was visible externally, and it was stated that no protrusion took place at stool. On the following day the patient returned to the country.

Since that time Madame X. has often had motions with scarcely any suffering; but being always constipated, she has frequently passed hard matters covered at first with a little blood, then with purulent matter; moreover, she takes walking exercise without the occurrence of the slightest prolapse.

It will be observed, in perusing the foregoing statement, that I followed in this case, both in the operation and in the subsequent treatment, precisely the method I have laid down for the cure of hæmorrhoidal tumors, namely, the cauterization of a portion of the mucous mass with forceps furnished with grooves filled with a caustic paste, and afterwards a strict diet, with the view of avoiding motions, particularly after the operation; accordingly, the consequences have been as simple and as favorable as in the affection I have just mentioned.

Prolapse might, no doubt, be treated with direct cauterization by means of a stick of Filhos' caustic; but this proceeding, though more simple, and not requiring a special instrument, would be more painful for want of the compression, and the continued injection of cold water.

Hitherto the result of the operation has been as satisfactory as could be wished, and it will continue so, if I may judge by the results we have obtained in the treatment of the largest hæmorrhoidal tumors.

To recapitulate from the foregoing, I think we may conclude:—

1. That the circular cauterization, such as I have described, enables us to cure hæmorrhoidal tumors, and the prolapse of the rectal mucous membrane which accompanies them.

2. That this operation has always been, in my hands, perfectly harmless in its immediate consequences.

3. That the health of hæmorrhoidal patients operated on after my mode has eventually improved, contrary to the generally received opinion.

4. That by circular cauterization we may also obtain the cure of prolapse of the mucous membrane of the rectum.—*Bulletin de Thérapeutique*, vols. 44 and 45.

Some Account of the Wounded in the Recent Bombardment of Sevastopol. By D. J. Dunigan, Esq., Surgeon, etc.—It may not be irrelevant to the subject, to give a short summary of the military position. The French occupy both flanks; the English are in the centre, their works being divided into the Right and Left Attacks (Chapman's and Gordon's batteries). The Right Attack fought the Mamelon, left flanks of Malakhoff, and Redan, and also some smaller works continuous with them. The Left Attack opposed the right flank of the works around the Malakhoff Tower, right flank of Redan, the Barrack, Garden, 4-Gun, and Flagstaff batteries.

The proximity of our batteries to those of the enemy ranged between 1800 and 660 yards; one, since raised in the Quarries, is distant only about 300 yards; the Rifle Pits, in advance, were, in some places, within 40 yards of each other.

During the bombardments, the Royal Naval Brigade sent 600 men into the trenches; those remained on duty between twenty-four and twenty-six hours; they marched into and out of battery under cover of night, to prevent the enemy firing upon them; the men took out their provisions cooked, and were accompanied by two Medical Officers —one for the Right, the other for the Left Attack.

The first parallel was occupied by the Royal Naval Brigade, Royal Artillery, Engineers, and Medical Officers, with their orderlies.

In the ravines, leading from the Camp to the batteries, ambulances were stationed for the transmission of the wounded to the Field Hospitals. The Medical Officers' duties in the trenches consisted, for the most part, in affording temporary relief to the wounded, namely, arresting hæmorrhage by ligature and tourniquet; splinting broken limbs, bandaging and forwarding the patients by fatigue parties on stretchers, to the different stations of the Ambulance Corps.

Most of the wounds were interesting in a Surgical point of view, but it would be both useless and tiresome to attempt even a list of them; yet some appeared to be so very singular in their nature, that I will mention those only, to the exclusion of all others.

I. *Shell Wounds.*

A seaman, knocked down by a fragment of mortar shell, was picked up dead. The head was apparently swept from his shoulders, but there was no trace of hæmorrhage. On disentangling his clothes, which were tightly jammed around the injured part, the head was found driven downwards into the chest, carrying with it a great portion of blue shirt and red comforter. A small tuft of hair alone was visible, at the bottom of a deep cavity. It was a regular intussusception.

An officer of Engineers had just entered the battery, when a 13-inch mortar shell fell close by him, exploding as it struck the ground. One thigh was blown into the air; the other, with its bones, shattered throughout, but retaining its continuity by means of the integuments, was thrown around the back of his neck, and hung pliantly over the opposite shoulder, just as the arm of a child might lie in contact with its mother's neck. He lived for a few minutes.

A shell from the Malakhoff burst through the embrasure of the right Lancaster gun, disabling four men. One received a compound comminuted fracture of the left thigh, and a similar injury of the arm; the second, a compound comminuted fracture of the left thigh; the third, a comminution of the right knee-joint and ankle, both which joints were widely open. About a pound weight of the iron shell was immovably impacted in the inner condyle of the femur. The fourth was an artilleryman at the next gun, whose tarsus was injured. There was extensive laceration in the three first cases, and the shock was extreme: there was an oozing or welling of blood in two of them. The Medical Officers attended to those cases where the men fell in rear of the embrasure, at which the enemy still continued to pour their shot and shell, but, fortunately for the Medical Officers, with less precision than before.

A shell was fired at a group, principally composed of Sappers and Miners. One was killed, his face having been shot away. Another was carried up to the first parallel badly wounded. On examination, it was found that half of the inferior maxilla of the dead man was driven into the roof of the second man's mouth.

A night or two after the capture of the Quarries, a man was killed in them by a shell from the Redan. An officer of the 97th, who was standing close by, received several severe superficial wounds from splinters. A foreign body was imbedded in the middle third of the left thigh, which was easily withdrawn by the finger. It was a large portion of one of the cylindrical bones of the man who had been killed; it was as sharp as a chisel.

Two artillerymen stationed in the 8-gun battery, in the advance, on the right attack, were sitting or lying down, engaged in conversation, when a shell exploded as it approached their position. The head of one was taken off, as if by an ax, above the neckcloth, the tie of which was undisturbed. The forearm of the other man must have lain in juxtaposition with his thigh, for both limbs were lopped off by the same blow, in a line corresponding with Poupart's ligament. This man lived for about half an hour, urgently requesting all around him to keep sprinkling his face with water. The wounds in both limbs were jagged. The muscles of the thigh were drawn out in long bands: there was no hæmorrhage.

Another artilleryman, somewhere about the same part of the works, had his left knee-joint laid open and comminuted by a fragment of shell: no shock; a slight hæmorrhagic oozing. As he approached the Medical Officers on a stretcher, he facetiously asked, if it was not "a wooden leg for him?" and as he was being carried to camp he asked us "to make the leg for him."

A 13-inch mortar shell dropped so close to a seaman that it burned his perinæum, testicles, and clothes as it burst. One of the ankle-joints was laid open; but the wonder is, how he escaped being blown to fragments.

About the central point of Gordon's battery, a shell burst among a gun's crew. One poor fellow was struck over the angle of the ribs. He uttered a cry for the Doctor, and rushed about twenty yards, when he staggered, fell, and instantly expired. His heart and great vessels were ruptured. A second man's face, right shoulder, and arm, with the trapezius and latissimus dorsi, were torn away from the body. A third received a compound fracture of ankle-joint, and a similar one of the ulna. The fourth escaped with a severe laceration of the calf of the leg.

An artilleryman, sitting near one of the magazines, had part of his thorax and shoulder cut away, in a line from the sterno-clavicular articulation to the hypochondrium, by the half of a 13-inch shell falling upon him.

As the Military Relief entered the Right Attack early one evening, the enemy opened a fire of shell upon them from the Garden batteries. One burst over the head of the column, by which two men were killed, and about a dozen seriously wounded, the legs and arms of some being carried away. One man, whose forearm was destroyed, had all the comminuted bones driven into the thigh.

II. *Wounds from round shot.*

These wounds are easily recognized at the first glance, as there is but little variety in the appearance they present. Most of the men killed by shot had their heads knocked away, either completely or in part. However, some cases occurred where those large projectiles went through the body, and even through the upper part of the thigh, making orifices of entrance and exit.

A bombardier, at one of the mortar batteries, while in the act of laying the mortar, was struck over the ribs by a spent shot, which had barely sufficient force to ricochet over the parapet, and drop into the covered way. As soon as the man was struck, he uttered a loud scream, and, as he fell, made a convulsive death-grasp, and seized the cap of the officer who was standing beside him. Death was instantaneous, although there was no mark nor breach of surface to show the size of the injury. Nothing could persuade his companions against the idea of his having been killed by a "wind contusion."

During the past winter, a shot ricochetted with great force over one of the parapets, carrying away the cap from a seaman's head. The man was a little stunned, but no further mischief ensued. When his cap was picked up it contained a handful of hair, which had been shaved from the scalp by the shot. This would have been "a poser" for the old wind contusionists!

III. *Bullet-wounds.*

Our advanced trenches being, in many places, within forty yards of the enemy's rifle-pits, wounds of great severity were inflicted on both sides, as the force of the bullets was undiminished by distance. The orifices of exit, caused by the conical balls, more resemble shell wounds, in some instances, than a bullet aperture. In wounds about the head, especially, I have seen nearly the whole of the parietal bone carried away.

Notwithstanding those jagged wounds from Minié balls, I have seen a soldier of the 41st hit by one on the nose, which caused as clean a wound as if done by a sharp knife. The nose was divided at the junction of the cartilages with the bones. The lower portion dropping down, but adhering by a good pedicle. It was brought together, as in hare-lip.

Most of the wounds caused by the new conical bullets are, however, remarkable for the manner in which they plough up the soft parts.

A soldier of the 33d was struck by a ball which made six openings. It passed through the right thigh, through the scrotum, and through the left thigh, where it escaped.

The Russians use several kinds of bullets—one a solid conical ball, which belongs to the Liège rifle ; another of a larger size and conical form ; hollow at the base, with a small pillar, or nipple, standing in the cavity. It is surrounded by three lines. At the base, to guide the ball in its flight, there are two other smaller ones, modifications of this principle. The old round ball is also still employed. In some cases two of those round bullets have been found connected by a transverse wire, like bar-shot.

IV. *Grape-shot wounds* have been severe and numerous. The following was an interesting case :—

A soldier of the 49th was struck on the temple by a grape-shot, which destroyed the squamous portion of the temporal bone. The brain was flowing through the wound, the man breathing stertorously. The grape-shot was supposed to be within the skull. It was subsequently found in his mouth, at the base of the tongue, pressing against the epiglottis.

Since the commencement of siege operations before Sevastopol, one Medical Officer has been killed, and two or three have been wounded. The first, Mr. O'Leary, Assistant-Surgeon of the 68th Regiment of Light Infantry, was actually cut in two by a cannon-ball while in the act of assisting a wounded seaman. It is only to be wondered at that more casualties have not occurred among the Medical Officers; for during the heat of the fire they are constantly called from place to place, running along the batteries through the line of fire, in quest of the wounded. During the second bombardment this peripatetic system was very trying and fatiguing, for the soil was heavy and tenacious from the torrents of rain that then deluged the trenches; and instances occurred where officers' boots drew off while running along to assist the wounded.

The French arrangements are excellent. They have established a surgery, with all the necessary appliances, in one of the ravines, where a staff of Medical Officers are stationed for daily duty. The Medical Officers in the trenches apply tourniquets, or do whatever is most urgently called for, on the spot, and then send the wounded on to the Hospital Staff, by whom they are next examined. If the cases demand immediate amputation, the operations are performed; if not so urgent, the cases are sent on to the Field Hospitals.

The duties of the siege fall heavily on the Medical Officers of the Naval Brigade, five of whom do that duty, and out of the five two go daily on trench duty. It comes to the turn of an Army Medical Officer to go less seldom into the trenches. The time of duty varies in the different divisions, according to the strength of the Medical Officers in them. In some the Medical Officer goes once in a fortnight, while in others the time extends even to once in five or six weeks. The Royal Artillery send no Medical Officer now, unless a general bombardment be going on. On the whole, this trench duty is very trying and hazardous; and, in performing it, the Medical men run the same dangers, if not more, certainly not less, than the executive Officers, who are generally stationary in a battery, while the Medical Officer, as ubiquitous as possible, is rushing in all directions to succor the wounded.—*Med. Times and Gazette.*

On Cæsarean Operation, and its performance more than once on the same subject. By Prof. STOLTZ, of Strasbourg.—For upwards of fifty years, says M. Stoltz, this operation, although frequently resorted to in Paris, has not generally been followed by success, whilst towards the close of the last century it was, in numerous instances, attended with the best results, in the hands of the celebrated accoucheurs of that period, Lauversat, Deleurye, Coutouly, Millot, etc. This failure of the operation, in the practice of modern surgeons, he considers as having led to its being regarded as much more hazardous than it really is, and to its consequent restriction to those cases in which it is found impossible to effect delivery by any other method. Thus, the accoucheurs of Paris have nearly all been induced to adopt the English practice, according to which, rather than risk the life of the mother, they sacrifice that of the child, wherever the difficulty appears surmountable by so doing; a proceeding which our author believes to be unjustifiable, on the grounds that one life is taken without any certainty of thus saving the other. M. Stoltz has performed the Cæsarean operation six times, with the result of saving both mother and infant in four of these instances, and the child in the remaining two. The latest of these cases is that which he communicates to the Academy of Sciences, as possessing additional interest in the fact of its being the second occasion in which the operation had been performed, with complete success, on the same individual.

The patient, Adele Fenninger, æt. 39, was the subject of general rachitic deformity, and had been operated on, three years previously, by Dr. Bach, of Strasbourg, who published the case in the *Gazette Médicale*, of that city, in 1846. On that occasion the operation was successful, although performed under very unfavorable circumstances, the patient being "radicalement" rachitic, in very delicate health, ill nourished, and suffering from considerable obliquity of the uterus. At the time of the operation, somewhat too large an incision in the abdominal and uterine walls was attended with troublesome protrusion of the intestines; and during the progress of the case, erysipelatous inflammation of the points of suture, and phlebitis, followed by œdema, of the left inferior extremity, were circumstances which more than once threatened the life of the patient; however, by careful attention, these dangers were averted, and a complete cure was obtained in the space of two and a half months.

The second operation, which presents no features of much importance, is minutely described by M. Stoltz, who remarks, that from the ordinary course of the second pregnancy, three years after the first operation, it may be concluded that the cicatrization of the uterus had been sufficiently perfect to resist with impunity a second dilatation of that organ; and that the second operation, like the first, had been complete in its success, mother and child being both saved. In conclusion, he refers to a number of other instances where the operation had been repeatedly performed on the same patient with successful results. The following published cases are enumerated by him, and the publication mentioned in which they are to be found:—

Dr. Mangold, of Bale, operated, first in 1797, and again in 1801, and M. Mautz, in 1807, upon the same patient, who died on the twenty-second day after the third operation.

Dr. Bacqua, of Nantes, operated successfully on one patient, first in 1797, and again in 1806.

Dr. Dariste, of Martinique, operated successfully on one patient in 1805 and 1807.

Dr. Lemaistre, d'Aix, operated three times on one patient, in 1805, 1807, and 1814. The patient died five days after the last operation.

Dr. Charmeil operated in 1813 (?), and another surgeon in 1814, on one patient, each successfully.

Chaussier communicates the successful performance of the operation a second time.

Merrem of Cologne, operated successfully on one patient, first in 1812, and again in 1826. Dr. Zwanck operated for the first time on a patient named Adametz; Dr. Weidemann operated a second time; Dr. Michaelis a third, and again a fourth time, with success.

Dr. Rouvin communicates a case where the operation was repeated with success. Dr. Bowen performed the operation twice on one patient, in 1833 and 1835, with success.

Professor Kilian, of Bonn, operated successfully on one patient, first in 1832, and then in 1838. In another case, he operated in 1837, and the same patient recovered from a repetition of the operation in 1843.

Dr. Mestenhaeuser operated successfully on one patient in 1840 and 1844.

Here then, adds M. Stoltz, are fourteen well authenticated instances of this operation having been successfully repeated on the same patients. In two of the cases mentioned, the operation was performed three different times, but, on the last occasions, followed by the death of the mother. In a third instance, however, it was performed no less than four times with complete success. This example would almost induce him to believe in those cases quoted by some authors, where women were said to have undergone the Cæsarean section six or seven times. —(*Gazette Médicale.*)

PRACTICAL MEDICINE.

Account of Certain Anomalous Cases resembling Variola and Scarlatina. By W. T. GAIRDNER, M.D.—Recently, before the Medico-Chirurgical Society of Edinburgh, the author made some remarks on these anomalous cases, and on certain forms of disease, closely resembling them, which he had observed at different times. According to Dr. W. T. Gairdner's experience, some forms of syphilitic eruption very closely simulated variola; and, though the distinction could generally be made either at once or after a short period of observation, yet cases were not wanting in which the febrile concomitants and the character and distribution of the eruption combined to deceive the practitioner until after the lapse of several days. A case of this kind, in which the eruption appeared to be determined in a syphilitic constitution by the use of hydriodate of potass, was detailed to the Society at some length; and others were more shortly alluded to. During the past winter, Dr. Gairdner had witnessed a number of cases which he was disposed to consider as irregular forms of scarlatina. The regular type of the disease, although not present in an epidemic form, had, nevertheless, been occurring throughout the winter in Edinburgh and the neighborhood, in isolated cases and groups of cases. In Leith, there had been few cases, and those very mild. In Corstorphine and in Cramond, cases of scarlet fever had likewise occurred. In London, it appeared, from the Registrar-General's returns, that scarlatina had been twice as frequent during the April quarter as during any similar period for the last five years; and Dr. Gairdner thought it not improbable that an epidemic of scarlatina was to be looked for in the course of the summer in Edinburgh. His attention had been attracted, while performing dispensary duty last winter, by a considerable number of those submaxillary and cervical suppurations or acute swellings which are known to accompany scarlatina in many cases. There were comparatively few of these in which the history of an eruptive disease could be traced; and in two cases, in which eruption distinctly presented itself while the case was under observation, there were peculiarities in its character which were worthy of notice. In one, the eruption was discovered for the first time in the second week. It had been carefully looked for, at a considerably earlier period, without result; and had altogether escaped attention, if, indeed, it occurred before. In its character and distribution it resembled roseola much more than scarlatina; and the case was published by Mr. Geo. S. Sutherland, to whom it occurred, in the last number of the *Edinburgh Medical and Surgical Journal*, as a case of doubtful exanthematic disease. Shortly afterwards, a case of unquestionable scarlatina, with an ordinary eruption, and severe throat affection, occurred in the immediate neighborhood (Blackfriars Wynd); and in this case, which was, like the other, fatal, the rare occurrence, first noticed by Dr. Willan, presented itself—viz.: a recurring eruption at a very late period of the disease—the thirteenth day; this secondary eruption being much brighter than the other. Dr. Gairdner had repeatedly seen the eruptions of scarlatina and of small-pox much retarded, both in the date of their appearance and disappearance; and this not only in severe and irregularly developed cases, like those just mentioned, but in some which ran quite a favorable, and, in other respects, a normal course. In one very mild case of scarlatina, he (Dr. Gairdner) had seen the eruption appear somewhat late, and continue very bright throughout the greater part of the second week, when the patient, indeed, was quite convalescent. Dr. Hamilton, of Falkirk—a good authority on scarlatina—had also repeatedly observed this retardation of the eruption, but, for the most part, in severe cases.

Dr. J. D. Gillespie remarked, that he had lately seen a case illustrating what Dr. Gairdner had observed as regarded a second eruption appearing in scarlatina. The patient was an infant nine months old, and was one of a family of nine children, who had all, except the eldest, had a second attack of the disease, the whole of them having had well-marked scarlatina about a year previously. The infant had a copious florid eruption, and other ordinary symptoms, from which it appeared to be convalescing, when, about a fortnight subsequently, very severe coryza supervened, and, some days thereafter, a very extensive eruption appeared, resembling, somewhat closely, the eruption of measles. This eruption remained out two days, and then swelling of the parotid and cervical glands ensued, under which the little patient at length succumbed. Professor Simpson and Dr. Priestly had both seen the case. The father of these children being himself a retired medical man, and a careful observer, there could be no doubt as to the recurrence of scarlatina in seven of his children.—*Edin. Med. Jour.*

On the Pathological Anatomy of Chronic Hydrocephalus. By M. Blache.—In this communi cation, read before the Academy of Medicine, by M. Blache, one of the candidates for the vacant place in the department of pathological anatomy; the author's intention is to describe, more precisely than has hitherto been done, the details of the pathological alterations resulting from this disease.

He first examines the changes undergone by the nervous substance itself and the membranes enclosing it; and then passes on to the consideration of those occurring in the different cerebral cavities, and the canals and orifices connected with them. The following are the conclusions at which M. Blache arrives:—

1. In internal hydrocephalus the serum accumulates in the cerebral ventricles, but not in the cerebellar or fourth ventricle; it does not communicate with the cephalo-rachidean liquid.

2. Contrary to the opinion of some authors, the white and the gray substances are recognizable in the nervous laminæ, into which the fluid pressure transforms the ventricular walls; when the distention has not been excessive, the circumvolutions are also to be found, and, in all cases, thickenings, which are the vestiges of them.

3. The corpus callosum, fornix, and septum lucidum, are almost entirely destroyed and converted into fibrous laminæ.

4. The tuberculum annulare, the cerebellum, and the origin of the cranial nerves, preserve their integrity, with the exception of more or less alteration, always existing in the optic and olfactory nerves.

5. The ventricular membrane is thickened so much as to be capa-

ble of dissection throughout its whole extent, by which it has been established to be continuous with the choroid plexus, and prolonged across the aqueduct of Sylvius and the foramen of Monro.

6. In the interval between the two laminæ, which, by facing each other, form the septum lucidum, it is easy to demonstrate the existence of the fifth ventricle, and its communication with the third.

7. The pituitary body is canaliculated.

8. The anterior orifice of the aqueduct of Sylvius was found obliterated in the two cases where this was examined; the cerebral cavities were thus completely closed.

9. Regarding the nature of the malady, the absence of all softening of the cerebral substance, and the very slightly plastic nature of the fluid effused, discountenance the idea of chronic hydrocephalus being the result of inflammation. In our opinion, says M. Blache, it is a pure and simple hydropsy.—*Edin. Med. Jour., from L'Union Médicale.*

On the Use of Chlorate of Potash in Mercurial Stomatitis.—From the experiments of M. Herpin, of Geneva, from those of M. Blache (*Gazette Hebdomadaire*, vol. ii., No. 8, page 147), as well as from some well-detailed facts that M. Demarquay has just reported, it would appear that chlorate of potash, given internally, arrests, with rapidity and certainty, the effects of mercurial stomatitis. This effect has been established in patients in whom the mercurial intoxication supervened on the exhibition of mercury for syphilis, puerperal peritonitis, and ophthalmia.

The chlorate is administered in a mucilaginous mixture, the dose commencing with half a drachm, which is frequently sufficient to remove the symptoms. But it has been given to the extent of four scruples, two and a half drachms, half an ounce, and upwards.

As this medicine, notwithstanding its remarkable efficacy, is by no means a specific, we must not neglect to combine with it local astringents and caustics, which, even alone, possess so powerful an action in mercurial ptyalism.

M. Gustin, intern in pharmacy, wishing, for the sake of experiment, to submit himself to the action of chlorate of potash, took two drachms at nine o'clock in the evening. On awaking, a sort of astriction, with slight nausea, was perceived in the mouth; the gums were a little rough to the touch. Although the saliva was not sensibly lessened, it appeared to him to be more watery than usual. This observer has also proved that the chlorate of potash is, in great part, eliminated by the urinary secretion.—*Bulletin Général de Thérapeutique*, and *Gazette Hebdomadaire.*

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Paronychia Benigna, Analysis of eighty-one cases, with Practical Observations. By Austin Flint, Jr., M.D.—From the foregoing facts we see that the causes of paronychia are various. The most frequent causes, however, are exposure of the hands to hot water, as in washing dishes, or a slight hurt or bruise. In forty-one cases the causes were of this description. More rarely the cause is general or constitutional, though this is sometimes the case. In ten cases the cause has been recorded, bad health, ship fever, suppressed menses, etc.

Of the entire number of cases, one was not properly a paronychia, but was a fungus at the root of the nail; eight were of the first variety, onychia cutanea; five were of the first and second variety, cutanea and cellulosa; and the remaining sixty-seven were of second, third, and fourth varieties, onychia cellulosa, tendonosa, and osteosa.

In the case of the fungus at the root of the nail, nothing is recorded, but that on the twenty-first day the fungus was the size of a pea.

The cause was recorded as constitutional in three of the five cases, which were of the first and second variety combined; there was no record, under this head, in the remaining two cases. In three of these cases the treatment was merely the application of arg. nit.; in one case it opened spontaneously on the eighth day, but the inflammation extended to the areolar tissue, pus was formed, and it was opened on the fourteenth day; in the remaining case there is no record under the head of treatment.

All these cases resulted in perfect cures.

Of the eight cases of the first variety, onychia cutanea, six were caused by slight injuries, and two were dependent upon constitutional causes. Six were treated with arg. nit, and poultices; one with a poultice alone; and one got well spontaneously. One, however, was opened before the arg. nit. was applied.

Four of these cases resulted in a perfect cure; one of them in the loss of the nail, and the remaining three appear to have been lost sight of.

In the sixty-seven cases which were of the second, third, and fourth varieties, I shall consider only one feature in the treatment, namely, whether it was opened or not, and how long after the commencement of the disease before it was opened. The other measures of treatment have been so imperfectly recorded, that their consideration would be of little value.

In fifty-five cases the result has been recorded. Thirty-six resulted in perfect cures; and nineteen, either in loss of part of the finger, or anchylosis.

Of the thirty-six cases, twenty-nine were opened; in the remaining seven cases, there is no record under this head. In twenty-seven cases pus had been formed; the remaining nine did not suppurate.

Of the twenty-nine cases where the finger was laid open, ten were opened on the seventh day; eight of these had suppurated and two had not. Seven were opened on the tenth day; three on the fourteenth day; two on the thirteenth day; one on the eighth day; one on the eleventh day; and one on the fifth day. All of these had suppurated. Two were opened on the fourth day, one having suppurated and one not. One was opened on the third day, and one on the second day; neither of them having suppurated.

In the nineteen cases where the cure was imperfect, twelve were opened, and in seven there was no record under this head.

One was opened on the twenty-eighth day; one on the twentieth day: one on the fifteenth day; one on the fourteenth; two on the seventh; and one on the fourth day. In the last case no pus was found. One case opened spontaneously. This case was treated by an empiric, who was prosecuted and mulcted in damages, for not opening the finger. The case resulted in a loss of the entire finger.

From the results of these fifty-five cases, we see that we may expect a perfect cure in the majority of cases. In the cases which resulted in perfect cures, only six, out of twenty-nine, were opened after the tenth day; seven were opened on the tenth day, and ten on the seventh day; and one was opened as early as the second day, before pus had been formed. None were opened later than the fourteenth day. But in the cases where the cure was imperfect, one was not opened at all; seven were opened from the fourteenth to the twenty-eighth day; two only were opened as early as the seventh day, and one on the fourth day.

These facts show the importance of opening the finger at least as early as the tenth day, and it would appear to be proper to do so, as soon as the disease has become established; even before pus has been formed.—*Buffalo Med. Jour.*

Paralysis Supervening after Anæsthesia by Sulphuric Ether. By Dr. Hooker, of East Cambridge, Mass.—In the month of November, 1853, I administered sulphuric ether to a gentleman from the country, for the purpose of removing a fatty tumor from the back part of the left shoulder and neck. The tumor extended from a little above the spinous process of the scapula along the trapezius muscle upwards, to its insertion in the occiput. The tumor was wholly between the fascia covering the muscle and the skin, leaving but little adipose matter between the tumor and the skin. The tumor was confined wholly to the left side, not extending over the median line, and was from five to six inches in length, and from two to three inches in width. The operation and dressing did not occupy more than half an hour, and during that time about eight ounces of concentrated sulphuric ether were used. For only a short space of time was the patient completely narcotized. The operation was performed in the sitting posture, and but little blood was lost. Before the dressing was completed, a change came over him, resembling syncope, and he was removed to his bed. Free emesis then took place, and he soon rallied, but not to perfect consciousness. After a little delay, he was left for the night, apparently as comfortable as is usual after etherization.

The next morning he gave the following account of himself during the evening and night. As his consciousness returned, he found the same prickling and benumbed sensation in his limbs, that he felt creeping over him when he first began to inhale ether. This was alike on both sides of his body. It soon passed off from the left side, but did not from the right. During the night, he found that he could not move his right arm and right leg, that they were destitute of sensation, and that he had not been able to move himself from the position in bed in which we had placed him after the operation. In this condition I found him in the morning. Complete paralysis of the right side, excepting the nerves of the face, tongue, and throat. He had retention of urine. The paralysis of the extremities continued for nearly a year, before he was able to use his limbs with any degree of freedom.

He was a man of forty years, healthy, of abstemious habits—a rigid cold-water drinker; had never had any paralysis before, nor is there any predisposition to it in the family. He was of a taciturn character, but for two or three weeks after the operation he was very jocose, exhibiting a degree of levity entirely at variance with his usual turn of mind. He had taken a good deal of exercise in the early part of the day of the operation, and had eaten pretty freely of a boiled dinner, consisting of potatoes and squash, with a small amount of corned beef, as was shown by what he ejected from his stomach. It will be remembered that he did not vomit till after he was placed in bed, and after the syncope.

The interesting question now occurs, what was the cause of the paralysis? Was it the inhaling of ether, or was it from the loaded state of the stomach and the shock the system may have sustained from the operation? To the friends, I suggested that it might have arisen from the two latter causes, as ether had, to my knowledge, never been known to produce permanent paralysis. I must confess, however, that the suggestion was far from being satisfactory to myself, and I have thought the case worthy of being reported to the profession.—*Boston Med. and Surg. Jour.*

Foreign Body in the right Bronchus—Ejected by exciting Cough. By Prof. Paul F. Eve, M.D.—On the 29th of April last, Mr. Hendrix of Marion county, East Tennessee, brought his son, aged four years, to Nashville, seeking relief from the symptoms produced by a grain of corn which had passed down his wind-pipe. This occurred two weeks previous to his arrival here, when the child was playing with his sister, who excited laughter while he was holding the grain of corn between his teeth. He was instantly seized with a severe paroxysm of cough, attended with threatened suffocation, which recurred at irregular intervals, but particularly early in the morning. Emetics, percussion upon the chest, inversion of the body, etc., having failed to remove the foreign body, the patient was then brought to our city.

Dr. Parks of Williamson county, (on a visit,) and Drs. Watson and Briggs examined the case with me. We ascertained that air was occluded from the right lung during ordinary respiration; but that some did penetrate at violent and sudden efforts at inspiration, and then there was loud mucus ronchus: there was increased expansion in the left lung; flatness on the right side of the thorax; altered voice; considerable febrile action, with irregular circulation, manifested, when the patient became excited, by distention of the veins in the neck, pallor of the lips, etc. There were no symptoms of the grain of corn having lodged in the larynx or trachea.

From these phenomena, collected, it is true, not only without the cooperation, but during the resistance of the patient, and from the history of the case, we diagnosed the presence of the foreign substance in the right bronchus. And it fortunately happened, during a violent paroxysm of cough, excited by manipulating upon the chest, and the anger of the boy, that the grain of corn was expelled and fell upon the floor of the room enveloped in mucus. Respiration instantly became easier and the unpleasant symptoms disappeared, leaving only a slight bronchitis.

The corn is a large grain of the common gourd seed variety, having a considerable spiculum at the cob extremity and a flattish one at the other or free end. The husk had probably been cut by the teeth of the child, for it was softened, even pulpy, and some of the farina had exuded and came up with the mucus from the bronchus.

One Remark.—Does not this case furnish a hint as to the propriety or necessity of operating for the removal of foreign bodies from the air-passages? It is this, so long as air, under any circumstances, *can pass the substance introduced*, we may hope for its expulsion without opening the larynx or trachea —*Nashville Jour. Med. and Surg.*

On the Use of Sulphate of Bebeerine in Menorrhagia. By Prof. A. P. Merrill, M.D.—A few weeks ago I was summoned, in haste, to a lady suffering from an attack of menorrhagia. She had been long subject to excessive menstrual discharges, and uterine hæmorrhages, and had been treated for them by several physicians without success. I administered five grains of the sulphate of bebeerine, which I happened to have in my pocket, and ordered twenty pills of four grains each, one of which she was directed to take every two hours, until relief should be obtained. On visiting her the succeeding day, she showed me the twenty pills, and said the dose I had given her suspended the discharge before they were brought from the druggist, and she deemed it unnecessary to take them. One other case, occurring about the same time, in all respects very similar to the above, was relieved, also, by a single dose of five grains.

I could relate more than a dozen cases besides the foregoing, more or less severe, in which the sulphate of bebeerine has been successful. Several women in this city are now in the habit of keeping the remedy always at hand, with perfect confidence, from the results of their own experience, of being able to restrain excessive menstruation, and uterine hæmorrhage, whenever they may occur. In several cases, also, I have known it relieve leucorrheal discharges, and to give tone and vigor to the vagina, suffering relaxation from the effect of such discharges; and it is the only internal remedy upon which I have been able to rely, for the relief of *pruritus vulvæ et vaginæ.* Whether this remedy will prove to be as valuable as the above experiments would seem to indicate, remains to be proved; and it is with a view to elicit such proof, that this publication is made.—*Memphis Med. Recorder.*

Complete Inversion of the Uterus—Restoration on the Seventh Day. By Prof. F. H. Hamilton, M.D—Mrs. A. B., aged twenty-two years, was brought to bed with her first child on Friday, the 30th of March, 1855. Mrs. B. had always been delicate. The labor was not rapid, nor remarkable in any respect. The surgeon in attendance, one of our most skillful and experienced country accoucheurs, was waiting quietly for the placenta, when, without any admonition, it was suddenly expelled, and at the same moment, the uterus become completely inverted. The surgeon was immediately aware of what had occurred, but in the midst of his surprise at so unusual an event, and his alarm for the safety of his patient, who seemed to be dying, he omitted to make any attempt to restore it to position.

After some hours, Mrs. B. began to rally, and from this time she steadily improved until I saw her, just seven days from the day of her delivery. She was then pale, but this was, in some degree, habitual. Her bladder and bowels had been emptied regularly. The uterus could not be felt in the belly. The hæmorrhage, which had never been excessive, ceased entirely a few days after the occurrence of the inversion. She had an almost constant pain in the region of the uterus and vagina, low down in her pelvis, with occasional exacerbations like after-pains. The uterus could be felt, as she lay upon her back, about one inch within the vulva, and of the shape and size, nearly, of a large pear. The fundus was rough and slightly fissured, feeling somewhat like the surface of a placenta, but much more firm. As the finger was pressed upwards and around the sides of the tumor, the surface became abruptly more smooth. The *cul de sac* formed by the reflection of the vagina from the neck of the womb was easily reached on all sides. The womb was not particularly tender to the touch.

Mode of Reduction.—The patient lying in bed upon her back, I introduced my right hand carefully into the vagina and pressed the womb upwards firmly, until the walls of the vagina were extended to their utmost, and my strength was nearly exhausted. During most of this time I was pushing with my four fingers and thumb, grasping the uterus, and only once did I rest a knuckle of my forefinger against the fundus. The patient was hurt considerably, but no impression was made upon the inversion.

After a few minutes I repeated the same manipulation, and with the the same result.

Reluctantly, I now made a third effort, having very little confidence that I should succeed, at least without the aid of chloroform. I employed at this time no more force, nor was it longer continued, but while I was pushing I felt the uterus gradually receding, and in a few seconds more my fingers were within the neck, which opened widely beneath the restored fundus and body. I continued to press gently against the inside of the womb, as if to support it from falling, and meanwhile the mouth was felt to be closing by a sensible and irregular contraction, until at length it was sufficiently closed to warrant a withdrawal of the hand.

The patient was only slightly fatigued. The womb could now be distinctly felt in the abdomen.

The process of restoration was by *evolution from the neck*, and not by introversion from the fundus. This could be distinctly observed throughout the procedure, the fundus being the last to disappear. There has been no recurrence of the accident, and her recovery is complete.—*Nashville Jour. of Med. and Surg.*

SURGERY.

Resection of the Superior Maxillary Bones for Medullary Fungus. By M. Shuppert, M.D., of New Orleans.—I ordered the patient to the Charity Hospital, on the 15th August, and operated next day in the amphitheatre of that institution, in presence of a number of medical gentlemen, with the assistance of Drs. Beard and Choppin.

The appearance of the disease at that time was as follows: On the right side of the face, below the orbit, between the zygomatic process and the nose, there was a tumor of $5^{cm.}$ in diameter at its base. The skin over it was red, and innumerable enlarged blood-vessels were to be seen just under the surface. Above the tumor there was an abscess of the lachrymal sac, and there was no doubt that the disease had extended to the left maxillary bone. Out of the nostrils protruded some tumors. Inside the mouth nearly the whole bony wall was involved in fungus growths of different sizes, of red color, and effusing matter of a penetrating odor.

He was put under the influence of chloroform. An incision was now made down the nose, beginning opposite the inner canthus of the eye, having the septum to the left, and cutting through the upper lip near the right edge of the fossa. A second incision was made, beginning at the same point as the first, and extending under the eye-lid to the molar bone of the right side of the face; and a third was made on the left side, of the same extent. The two flaps were now detached from the bones and held back by assistants. The greater part of the right superior maxillary bone was gone and replaced by fungus growth. From the left maxillary bone about two-thirds were taken with Liston's process. The flaps were brought back to their places and retained by twisted sutures. Patient lost but little blood. At night he had slight fever. Morphine was ordered.

On the 5th day the needles were taken out, and notwithstanding the parts had healed, adhesive strips were applied to support the cicatrices. On the 10th day the patient was sent out of the hospital. His appetite had returned; he could sleep well, and his strength was being rapidly regained.

During the operation, the patient was under the influence of chloroform up to the time of the application of the cautery. Notwithstanding the blood was constantly running into the fauces during the operation, it was promptly rejected by the involuntary muscular motion.

Four weeks have elapsed since the operation was performed, and the patient is not only able to attend to his daily labors, but he has been during that time restored to society, and these results alone are a full equivalent for the few hours of suffering consequent on the operation.—*N. O. Med. News.*

On the Effects produced upon the Brain by, and the Statistics of, Ligature of both Primitive Carotid Arteries. By Geo. C. Blackman, M.D., Prof. of Surgery in the Medical College of Ohio.—To an exceedingly valuable and elaborate paper on this subject, published in the September number of the *Western Lancet*, we find appended the following remarks:—Our table embraces, including the one witnessed by Chelius, and the last reported of Dr. Mott, twenty cases, and of these the operation was followed by fatal results in but two instances. Dr. Mott tied both with an interval of only 15 minutes, and the result was almost immediately fatal. This case is a sufficient refutation of the doctrine laid down by Mr. Miller, in his paper to which we have already referred, and which was published in the *Ed. Month. Journ.* for Jan. 1842. After examining the results of the experiments of Mr. Robert on animals, Mr. M. asserts, that in future, we need not hesitate to secure both common carotids by ligature simultaneously, should circumstances imperatively demand such a severe proceeding.

The shortest period at which both carotids have been successfully tied, is four and a half days. The operation was performed by Dr. John Ellis, of Grand Rapids, Michigan, to arrest the hæmorrhage, proceeding from a gun-shot wound of the neck. The patient was 21 years of age. The left carotid was secured, Oct. 28th, 1844, and the right 4½ days subsequently. A slight coldness of the face on the side of the operation followed the application of the first ligature, and there was an occasional throbbing beneath the sternum. There was "slight paleness" after the second operation, and at the end of 24 hours the patient began to suffer from a hacking cough and difficulty of breathing. These symptoms at length yielded to venesection, aconite, and belladonna. In June, 1845, the patient was enjoying comfortable health and attending to business (*New York Journ. of Medicine, &c.*, Sept., 1845).

In conclusion, we may remark, the mortality following the ligature of both primitive carotid arteries, as shown by our table of cases, contrasts strangely with that in the one drawn up by Dr. Norris, of the ligature of one of these trunks (*American Journal of Medical Science*, vol. xiv. 1847). While his statistics show a mortality of 1 in 4 7–10 cases, our collection of both carotids exhibits but 1 in 20 cases. This estimate, of course, does not include Prof. Parker's fatal case, the cause of death in this being somewhat uncertain.

Dislocation of the Femur into the Ischiatic Notch. Reduction by Manipulation. By Prof. HAMILTON.—*March* 23, 1855.—Charles McCormick, aged 21 years, at work for the "State Line R. R. Co." was caught between two freight cars, with his back resting against one and his right knee against the other; his thigh being raised to a right angle with his body. As the cars came together he felt a "cracking" at his hip joint, and was immediately unable to walk or stand.

Two hours after, I saw McCormick, his right thigh was flexed upon his body to nearly a right angle and adducted, the knee being carried across the opposite thigh. It was also rotated inward, but not forcibly.

Procedure.—The patient lying upon his back, I seized the right leg and thigh with my hands, the leg being moderately flexed upon the thigh, and carried the knee slowly up towards the belly until it had approached within twelve or fifteen inches, when, noticing a slight resistance to farther progress in this direction, I carried the knee across the body outward, until I again encountered a slight resistance, and immediately I began to allow the limb to descend. At this moment a sudden slip or snap occurred near the joint, and I supposed reduction was accomplished; but on bringing the limb down completely I found it was in the same position as before. I think the head had slipped off from the lower lip of the acetabulum, after having been gradually lifted upon it.

Without waiting, I commenced to repeat the manipulation, and in precisely the same manner. Again at the same point, when the limb was just beginning to descend, a much more distinct sensation of slipping was felt, and on dropping the limb it was found to be in place and in form, with all its mobility completely restored.

No anæsthetic was employed, and no person supported the body or interfered in any way to assist in the reduction. No outcry was made by the patient, yet he informs me that moving of the limb hurt him considerably. The amount of force employed by myself was just sufficient to lift the limb, and the time occupied in the whole procedure was only a few seconds.—*Buffalo Med. Journal.*

THERAPEUTICS.

Sulphate of Quinidine in Intermittent Fever. By C. B. GUTHRIE, M.D.—The thirteen cases here reported were treated with quinidine, the sub-salt of the new Bogota bark—called by writers *China Bogotensis*. This new alkaloid differs from quinine, and has been esteemed as of less value in the treatment of periodic diseases. This bark is found in the province of Fusagasoga, some twenty-five miles from Bogota, and is generally recognized under the common name of Bogota bark, a name applied commercially to all barks from that region of South America, though including seven or eight varieties, many of which contain quinine and cinchonine.

These cases were reported by Dr. Foote, of Texas, then a student in attendance at the Dispensary. Dr. F. remarks in his report to me, "In none of the thirteen cases did I hear any complaint of its affecting the head unpleasantly, as quinine so often does, though in many instances given in larger doses than we usually administer quinine." He also remarks that from the effect of the quinidine as exhibited by the cases reported, we are bound to acknowledge its "great anti-periodic power."

The question with the medical profession, especially here in the south and south-west, is not whether quinidine has anti-periodic properties alone, but whether it has not this therapeutical effect without the disagreeable adjuvant found in the quinine, and also whether the use of this alkaloid, the product of a bark not monopolized by the English government, or for which we may not be obliged to pay her tribute, may not be less expensive and quite as certain as quinine?—*Memphis Med. Rec.*

"*Sugar and Salt as a local Solvent in Chronic Congestion of the Cervix Uteri.* By Dr. F. J. Bumstead.—The following novel method of reducing the congested state of the cervix uteri, which is so commonly met with in the chronic affections of this organ, accompanied by discharge from the os and "ulceration" of its mucous surface, has been so successful in my hands, and in the practice of several gentlemen to whom I suggested its use, that I desire to make it more generally known through the pages of your journal. The plan of treatment of which I speak originated, I believe, with M. Caudmont of the *Ecole Pratique*, Paris; at any rate, whether original or not with him, it first came to my knowledge, four years ago, from his practice at his private clinique, and I have been unable to trace it to any other source.

The following is the method of its application:—The os uteri having been exposed by means of the speculum, equal parts of sugar and common table-salt, finely pulverized and mixed, are impacted around the vaginal portion of the cervix uteri, and retained in place by a pledget of lint or cotton wadding, moulded into the form of a *godet*, or small cup, and having a string attached to its convex surface to facilitate its subsequent extraction. Thus applied, it is left *in situ*, and the patient is directed to withdraw the plug, by means of the string attached, in the course of twelve to twenty-four hours.

Its effects are to produce a very copious discharge from the parts to which it is applied; so much so, indeed, that patients should be cautioned to take means for the protection of their linen; and at the following examination the cervix is found to be greatly relieved of its swollen state due to the products of congestion, and much reduced in size.

The most obvious explanation of the action of this application would appear to be found in the principle of exosmosis. Its advantages over the use of leeches or potassa fusa to accomplish the same purpose, are obvious. It is exceedingly simple and speedy in its action; it is attended with no danger of injury to the neighboring parts or of hæmorrhage; it attains the end with but little pain or inconvenience to the patient. Moreover, the experience of several gentlemen, enjoying a large field for observation in the treatment of uterine diseases, whom I induced to make a trial of Caudmont's method, confirms the result of my own practice, viz.: that it is even more efficacious as a solvent than the ordinary applications in chronic congestion of the cervix uteri."—*N. Y. Med. Times.*

Aromatic Syrup of Galls.—The following preparation has been considerably employed in Philadelphia, and is attributed by some to the late Dr. Joseph Parrish of this city. It is used in the diarrhœa of children.

Take of Galls, powdered	half an ounce
Cinnamon, bruised,	
Nutmegs, bruised, of each	two drachms.
French brandy,	half a pint.
Sugar, in small lumps,	two ounces (troy.)

Macerate the solid ingredients in the brandy for twenty-four hours, throw in a filter, and, when drained, add diluted alcohol till half a pint in all has passed.

Having placed the tincture in a shallow capsule, suspend the sugar over it, on a slip of woven iron wire, and then inflame the tincture. The flame proceeding from the burning alcohol fuses the sugar and scorches it so as to produce a portion of caromel, and as it melts it falls into and dissolves in the liquid beneath. When the combustion stops the whole should be stirred and filtered for use.—*Editor Amer. Jour. Pharmacy.*

To preserve Compound Syrup of Squills—Hive Syrup.—By A P. Sharp, M.D., of Baltimore.—Hive syrup being one of the most common and important syrups kept by the pharmaceutist, it is all important that it should be properly prepared, and not likely to ferment. In order to avoid the latter difficulty, (which is the common complaint among druggists and pharmaceutists,) I have tried several processes, intended, at the same time, to get possession of all the active principles of the root. The following method has proved the most effectual in overcoming the difficulty spoken of, and, at the same time, yields a beautiful, active, and certain preparation.

As soon as one lot is prepared, I immediately put another one under way, as follows:

The Seneka and squills (of each 8 oz.) are bruised to a coarse powder, and macerated with one gallon of diluted alcohol, (alcohol 1 qt., water 2,) until my stock of syrup is nearly out, (sometimes standing two or three months,) and then pressed or transferred to a percolator and displaced. The tincture is then evaporated until I am satisfied there is no more spirit left. I then filter, when cold, to get rid of the albumen and resinous matter, and then add the sugar (7 lbs. troy) and evaporate (without boiling) to the proper quantity, (6 pints,) strain, if necessary, and add the tartar emetic, (96 grs.) Any one pursuing this plan, I think, will obtain a syrup that will prove satisfactory to himself, as well as to his customers.—*Stethoscope.*

MISCELLANEOUS.

A Remarkable Case of Super-Fœtation.—The following case was related to us by Dr. Bigelow, of this city, who is cognizant of the facts:—Mrs. C., æt. 18, of healthy constitution, accustomed to menstruate every two weeks, was married Oct. 9, 1854, after which she had three menstrual periods in regular succession. On the 10th day of July following (nine months and one day after marriage) she gave birth to a full-sized male child. She did not, however, regain her former size, the lochia continued for a week; the milk was watery and scantily secreted, so that the child had to be fed, and in about a week she was up. She continued well until the 22nd of Sept., (72 days after the birth of her first child), when she was taken sick, as she supposed, with cholera morbus, but after a short labor she gave birth to a female child, of about the same size as the former. The lochia continued longer this time, and the milk was secreted abundantly. Both children are thriving, and the mother is in perfect health.

Second Edition of Prof. Bedford's *Work on the Diseases of Women and Children.*—We have received a *second Edition* of Prof. Bedford's *Clinical Lectures*, the first edition of which was issued about three months since. The rapid sale of this work we believe to be unprecedented in the history of medical literature in this country, which, with the general favor which it has received from the press, must prove highly gratifying to the author, showing, as it does, the degree of estimation placed upon his labors by the medical public. The following is the author's preface to the second edition:—"My Publishers having informed me that it is necessary to put to press a second edition of the '*Clinical Lectures on the Diseases of Women and Children*,' it would be affectation in me not to express the pleasure I derive from the rapid sale of the work, which, it must be admitted, is not only novel in its general arrangement, but which constitutes a very distinct departure from the systematic treatises heretofore presented to the practitioner and student of medicine. I was anxious that the Lectures should go forth to the profession without any concealment as to the circumstances under which they were delivered. The diseases discussed are, as it were, so many types of what the physician is constantly called upon to treat in his daily rounds of duty, and, therefore, their character is essentially practical. To say that the first edition has been exhausted in a period of three months, is at once an acknowledgment of the kind appreciation of my professional brethren. But I should be wanting in candor if I did not add that, in my opinion, the success of the work has been materially aided by the flattering criticisms of my brethren of the medical press. To those gentlemen who have so generally and spontaneously, in language of kindness, spoken of my work, I beg leave most cordially to return my thanks. I feel much gratified with their flattering commendations. It will be seen that I have added to the present edition *Formulæ of Remedies*, which, I trust, will prove serviceable."

College of Physicians and Surgeons.—Chair of Chemistry.—We learn that Professor Torrey, finding that his engagements at the United States Assay Office will prevent the satisfactory performance of his Collegiate duties, has resigned the Chair of Chemistry which he has held with so much credit to himself for the long period of nearly thirty years. To supply the vacancy thus created, the Trustees have selected Professor John Le Conte of the University of Georgia, who, we are happy to state, has accepted the appointment, and will enter on the performance of his public duties at the commencement of the ensuing Session. As this gentleman's name, though well-known to American Naturalists, among whom he has already gained an enviable reputation, may not be familiar to our purely medical readers, we have thought that something more than a mere announcement of his appointment might be acceptable to them. Professor Le Conte is a graduate of the College of Physicians and Surgeons of the class of 1840-41. In 1846 he was appointed Professor of Chemistry and Natural Philosophy in the University of Georgia. Here he soon acquired great popularity as a lecturer and has for some years been looked on as one of the strong men of that Faculty. From this scene of honorable labor he is now summoned, at the unanimous recommendation of the Faculty, his future associates, and by a vote of the Trustees equally unanimous, to take his place among the teachers in his alma mater. From intimate personal acquaintance we have no doubt that Professor Le Conte will amply justify the good opinion of the Faculty and Trustees. As an assiduous and successful cultivator of Natural Science he will not only be a great gain to the particular Institution in which he is to labor, but a most valuable addition to the scientific men of our city and State.

The following highly complimentary resolutions were adopted by the class of the University of Georgia, on the occasion of his leaving that Institution:

> *Resolved*, That we deplore the resignation of Dr. Le Conte, as a loss to the community, as a loss to our State University, and as an irreparable loss to ourselves.
>
> *Resolved*, That his uniform courtesy and gentlemanly bearing towards the Students, and his kind attentions and medical advice to them when sick, have enshrined his memory in their hearts.
>
> *Resolved*. That his indefatigable efforts to promote their advancement in science, deserve our sincere and lasting gratitude.

Resolved, That our warmest wishes for his prosperity and happiness accompany him to his new home; and that, wherever his future lot may be cast, our sincere desire is, that he may receive the appreciation to which he is justly entitled by his merits as a man, and his attainments as a scholar.

Resolved, That a copy of these Resolutions be forwarded to Dr. Le Conte at the city of New York.

L. S. Wilson,
Frank M. Green,
Edward D. Beman, } *Committee.*

Atlanta Medical and Surgical Journal.—Since the issue of our last number we have received the first two numbers of a monthly journal published at Atlanta, Ga. It is edited by Drs. Logan and Westmoreland, Professors in the Atlanta Medical College, and judging of the merits of the specimens before us, deserves the patronage of the profession. We welcome it to our exchange list.

Vermont Medical College.—The Chair of Anatomy in this College, recently made vacant by the resignation of Prof. Elliott, has been filled by the election of John W. S. Gouley, M.D., of New York city. This is an admirable selection, and one destined to advance the interests of the School, as Dr. Gouley unites in the highest degree the qualities of a successful student and competent teacher of Anatomy.

Second Edition of Vidal on Venereal Diseases.—We have received from Messrs. Wood, of this city, a second edition of Vidal's Treatise on Venereal Diseases, just issued. It is a work well deserving the rapid sale which it has met.

OBITUARY.

Death of Moreton Stillé, M.D.—Died at Saratoga Springs, on the 20th of August, Moreton Stillé, M.D., aged 33 years. Dr. Stillé was a resident of Philadelphia, where he had acquired an enviable reputation as a writer and lecturer. He had just finished the preparation of a work on Medical Jurisprudence, on which he had been most devotedly engaged for the last two years of his life.

Death of Elisha Bartlett, M.D.—Died at Smithfied, R. I., on the 12th of July, Elisha Bartlett, M.D., late of this city. It is with profound regret that we record the decease of this eminent physician. His loss to our profession is almost irreparable, whether considered as an author or teacher. At the time of his death, Prof. Bartlett occupied the Chair of Materia Medica in the *Coll. of Phys. and Surgeons*, in this city.

We hope to be able to present our readers with a more perfect biography of the deceased, at some future period.

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MASSACHUSETTS MEDICAL SOCIETY.

PRIZE QUESTION.

Through the liberality of one of its Fellows, the Massachusetts Medical Society is authorized to offer the sum of *One Hundred Dollars* to the author of a Dissertation, which may be adjudged worthy of a prize by a Committee appointed by the Councilors of the Society, on the following subject, viz.:

"*The History and Statistics of Ovariotomy, and under what circumstances the operation may be regarded safe and expedient.*"

Dissertations for the prize must be sent, post-paid, to the Corresponding Secretary, Dr. C. E. Ware, 6 Temple place, Boston, on or before the *first Wednesday* of April, 1856.

The Prize is open to the profession throughout the country.

By order of the Massachusetts Medical Society,

B. E. COTTING, Recording Secretary.

Roxbury, Mass., Aug. 11, 1855.

NEW YORK OPHTHALMIC SCHOOL.

FOURTH SESSION.

Dr. M. Stephenson will repeat his Course of Lectures on OPHTHALMIC SURGERY, at the N. Y. Ophthalmic Hospital, No. 6 Stuyvesant-street, during the Winter of 1855–6. For further particulars inquire of Dr. S., at No. 167 East 14th-street. The avails of the Course to be given to the Hospital.

Testimonials from the Class of 1854–5.

"*Resolved:*—That we highly appreciate the Professional and Gentlemanly deportment of Drs. Stephenson and Garrish, the attending Surgeons of the New York Ophthalmic Hospital; not only in their skillful and humane attention to the afflicted poor; but also in their readiness to impart clinical instruction to the members of the New York Ophthalmic School."

"*Resolved:*—That the New York Ophthalmic Hospital and School are not the least among the numerous advantages which the city of New York affords to medical pupils, over that of any other on the continent of America."

"*Resolved:*—That we have listened with great satisfaction to the instructive Course of Lectures recently delivered by Dr. M. Stephenson, on Ophthalmic Medicine and Surgery at the Hospital

Extracts from the published resolutions of the class.

G. F. Thompson, M.D.
J. Simpson, M.D.
H. L. Kelley, M.D.
} Committee.

New York, March 1, 1855.

UNIVERSITY OF NASHVILLE.

MEDICAL DEPARTMENT.

The Fifth Annual Course of Lectures in this Institution will commence on Monday, the 29th of October next, and continue till the first of the ensuing March.

PAUL F. EVE, M.D., Principles and Practice of Surgery.

JOHN M. WATSON, M.D., Obstetrics and the Diseases of Women and Children.

W. K. BOWLING, M.D., Theory and Practice of Medicine.

A. H. BUCHANAN, M.D., Surgical and Pathological Anatomy.

C. K. WINSTON, M D., Materia Medica and Medical Jurisprudence.

ROBERT M. PORTER, M.D., General and Special Anatomy.

J. BERRIEN LINDSLEY, M.D., Chemistry and Pharmacy.

THOMAS R. JENNINGS, M.D., Institutes of Medicine and Clinical Medicine.

WILLIAM T. BRIGGS, M.D., Demonstrator of Anatomy.

The Anatomical Rooms will be opened for students on the first Monday of October.

A full *Preliminary Course* of Lectures, free to all students, will be given by the Professors, commencing also on the first Monday of October.

A Clinique has been established in connection with the University, at which operations are performed, and cases prescribed for, and lectured upon, in presence of the Class.

Amount of Fees for Lectures in the University is $105. Matriculation Fee, (paid once only,) $5. Practical Anatomy, $10. Graduation Fee, $25.

Good boarding can be procured at about $3 per week.

Further information can be obtaind by addressing

J. BERRIEN LINDSLEY, Chancellor of the University.

NASHVILLE, TENN., July 18, 1855.

Castleton (Vt.) Medical College.

There are two full Courses of Lectures annually in Castleton Medical College, the *Spring Session* commencing on the first Thursday in February, the *Autumnal Session* on the first Thursday in August. Each Course will continue four months.

JOSEPH PERKINS, M.D., Prof. of Materia Medica and Obstetrics.

WILLIAM SWEETSER, M.D., Prof. of Theory and Practice of Medicine.

MIDDLETON GOLDSMITH, M.D., Prof. of Surgery.

WILLIAM C. KITTRIDGE, A.M., Prof. of Medical Jurisprudence.

CORYDON LA FORD, M.D., Prof. of Anatomy and Physiology.

GEORGE HADLEY, M.D., Prof. of Chemistry and Natural History.

ADRIAN T. WOODWARD, M.D., Demonstrator of Anatomy.

FEES.—For Lectures, $50. For those who have attended two Courses at other Colleges, $10. Matriculation, $5. Graduation, $16.

Board per week, $2 to 2,50. J. PERKINS, M.D., *Dean of the Faculty.*

CASTLETON, VT., Jan. 1, 1855.

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